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U. S. DEPARTMENT OF AGRICULTURE.

OFFICE OF EXPERIMENT STATIONS—BULLETIN NO. 165.

A. C. TRUE, Director.

PROCEEDINGS

OF THE

TENTH ANNUAL MEETING

OF THE

AMERICAN ASSOCIATION OF FARMERS' INSTITUTE WORKERS,

HELD AT

WASHINGTON, D. C., NOVEMBER 9-11, 1905.

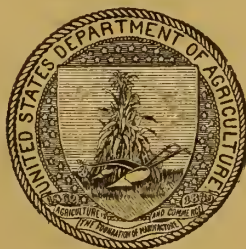
EDITED BY

W. H. BEAL and JOHN HAMILTON,

For the Office of Experiment Stations,

AND

G. C. CREELMAN,

For the Association.

WASHINGTON:

GOVERNMENT PRINTING OFFICE.

1906.

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- WASHINGTON.—E. A. Bryan, president Agricultural College and School of Science, Pullman; E. E. Elliott, professor of agriculture, Washington Agricultural College, field agent in charge of institutes, Pullman.
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- WISCONSIN.—G. B. McKerrow, director Farmers' Institutes, Madison.
- WYOMING.—B. C. Buffum, director Agricultural Experiment Station, Laramie.

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1906.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF EXPERIMENT STATIONS,
Washington, D. C., January 15, 1906.

SIR: I have the honor to transmit herewith, and to recommend for publication as Bulletin No. 165 of this Office, a report of the proceedings of the tenth annual meeting of the American Association of Farmers' Institute Workers, held at Washington, D. C., November 9-11, 1905.

Respectfully,

A. C. TRUE,
Director.

Hon. JAMES WILSON,
Secretary of Agriculture.

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RETIRING OFFICERS OF THE ASSOCIATION.

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F. H. HALL, of Illinois; L. A. CLINTON, of Connecticut.

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G. C. CREELMAN, Guelph, Canada.

Vice-President.

W. W. MILLER, Columbus, Ohio.

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JOHN HAMILTON, Washington, D. C.

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DELEGATES AND VISITORS IN ATTENDANCE AT WASHINGTON.

AITKEN, G., Woodstock, Vt.
 ALLEN, E. W., Washington, D. C.
 AMOSS, W. L., Benson, Md.
 BEAL, W. H., Washington, D. C.
 BREEN, Miss MARY C., Washington, D. C.
 BROWN, JAMES F., North Stonington, Conn.
 BROWN, Mrs. JAMES F., North Stonington, Conn.
 BURNETT, E. A., Lincoln, Nebr.
 BUTLER, TAIT, Raleigh, N. C.
 CARY, C. A., Auburn, Ala.
 CHARLTON, J. A., Toronto, Canada.
 CHARLTON, Mrs. J. A., Toronto, Canada.
 COFFEY, G. N., Washington, D. C.
 COOK, H. E., Denmark, N. Y.
 COOK, W. M., Camden, Ohio.
 CREELMAN, G. C., Guelph, Canada.
 CRITCHFIELD, N. B., Harrisburg, Pa.
 DAISH, W. M., Washington, D. C.
 DANIELS, H. O., Middletown, Conn.
 DAVIS, F. L., North Pomfret, Vt.
 DEXTER, W. H., Takoma Park, D. C.
 DODSON, W. R., Baton Rouge, La.
 DRURY, J. H., Chaney, Md.
 DUNCAN, D. I., Selma, Ind.
 EIDSSNESS, L. M., Washington, D. C.
 ELLIOTT, A., Galt, Ontario, Canada.
 ELLSWORTH, J. L., Boston, Mass.
 FREEMAN, F., Willows, Cal.
 FRENCH, H. T., Moscow, Idaho.
 GARVIN, J. B., Charleston, W. Va.
 GOODRICH, C. L., Glenndale, Md.
 GRAY, Miss LILLIAN D., Toronto, Ontario, Canada.
 GREGG, O. C., Lynd, Minn.
 HALL, FRANK H., Aurora, Ill.
 HALSEY, Mrs. S. W., Washington, D. C.
 HAMILTON, JOHN, Washington, D. C.
 HARLOW, G. A., Alexandria, Va.
 HARPER, J. N., Clemson College, S. C.
 HAYS, W. M., Washington, D. C.

HUGHES, Mrs. A. W., Washington, D. C.
 JAMES, E. J., Urbana, Ill.
 KAHLER, A. J., Hughesville, Pa.
 KAUFMAN, E. E., Bismarck, N. Dak.
 KAUFMAN, Mrs. E. E., Bismarck, N. Dak.
 KENNEDY, P. B., Reno, Nev.
 KING, W. M., Glencarlyn, Va.
 KING, Mrs. W. M., Glencarlyn, Va.
 KYDD, W. F., Simcoe, Ontario, Canada.
 LATTI, W. C., Lafayette, Ind.
 LEE, J. G., Baton Rouge, La.
 LEE, Miss MARY E., Westerville, Ohio.
 LLOYD, E. R., Agricultural College, Miss.
 LLOYD, Mrs. E. R., Agricultural College, Miss.
 MACKINTOSH, R. S., Auburn, Ala.
 MADDOCK, Miss BLANCHE R., Guelph, Ontario, Canada.
 McDONNELL, HENRY, College Park, Md.
 MEAD, ELWOOD, Washington, D. C.
 MILES, H. C. C., Milford, Conn.
 MILLER, H. H., Guelph, Ontario, Canada.
 MILLER, W. W., Columbus, Ohio.
 PATTERSON, JAMES K., Lexington, Ky.
 PATTERSON, H. J., College Park, Md.
 PUTNAM, G. A., Toronto, Ontario, Canada.
 RANKIN, F. H., Urbana, Ill.
 RANKIN, Mrs. F. H., Urbana,
 READEY, J. C., Charlottetown, Prince Edward Island, Canada.
 REID, S. E., Charlottetown, Prince Edward Island, Canada.
 ROSE, Miss LAURA, Guelph, Ontario, Canada.
 SCHWINK, J. G., jr., Meriden, Conn.
 SCOVELL, M. A., Lexington, Ky.
 SIMONDS, J. F., Riverdale, Md.
 SIPE, Miss SUSAN B., Washington, D. C.
 SMITH, Miss AGNES B., Hamilton, Ontario, Canada.
 SOULE, A. M., Blacksburg, Va.
 STADTMUELLER, F. H., Elmwood, Conn.

STROUP, H., Paris, Ark.	VREELAND, HUBERT, Frankfort, Ky.
SYMONS, THOMAS B., College Park, Md.	VREELAND, MRS. HUBERT, Frankfort, Ky.
TAFT, L. R., Agricultural College, Mich.	WEBB, WESLEY, Dover, Del.
TALIAFERRO, W. T. L., College Park, Md.	WEEMS, FRANKLIN, Upper Marlboro, Md.
TILLMAN, J. N., Fayetteville, Ark.	WHEELER, C. F., Washington, D. C.
TOWER, E. E., Hopbottom, Pa.	WILSON, HON. JAMES, Washington, D. C.
TRUE, A. C., Washington, D. C.	WYMAN, B. F., Sycamore, Ill.
UTTER, DELBERT, Lake Beulah, Wis.	YODER, P. A., Logan, Utah.
VINCENHELLER, W. G., Fayetteville, Ark.	

CONSTITUTION OF THE ASSOCIATION.

ARTICLE I.

NAME.

This organization shall be known by the name of The American Association of Farmers' Institute Workers.

ARTICLE II.

OFFICERS.

The officers shall consist of a president, vice-president, and secretary-treasurer, to be elected by ballot.

ARTICLE III.

MEMBERSHIP.

Any active worker in the farmers' institutes in the United States and Canada may become a regular member of this association on payment of the annual dues, and is entitled to one vote. A delegate member representing the State Farmers' Institute organization shall be admitted from each State and Province, on compliance with the by-laws, and shall be entitled to cast five votes on any question: *Provided*, That the annual membership dues of the person shall be \$1 and that of the State \$5. Also the United States Department of Agriculture and the Office of Experiment Stations of that Department shall each be entitled to representation in the association, with the full privileges of delegate membership.

ARTICLE IV.

DUES.

The annual dues of delegate members shall be \$5 for six representatives of each State. The annual dues of members not delegates shall be \$1.

ARTICLE V.

TERM OF OFFICE.

The term of office of the officers of this association shall be for one year from the 1st day of January next following their election, or until their successors are elected.

ARTICLE VI.

DUTIES OF OFFICERS.

The duties of the officers of this association shall be those usually performed by officials of like rank in similar associations.

ARTICLE VII.

ASSOCIATE MEMBERS.

Honorary members of this organization may be elected from time to time upon the presentation of their names by some member of the association and upon their receiving the votes of at least two-thirds of the members present.

ARTICLE VIII.

POWER OF HONORARY MEMBERS.

Honorary members shall be entitled to sit in all of the sessions of the association and to take part in all discussions, but shall have no vote.

ARTICLE IX.

BY-LAWS.

This association shall have power to make by-laws from time to time not inconsistent with this constitution.

ARTICLE X.

EXECUTIVE COMMITTEE.

There shall be an executive committee, consisting of the president and the secretary-treasurer of this association, ex officio, and three other members, to be elected annually by ballot, who shall meet at the call of the president and have charge of such matters of business relating to the association as shall be necessary to attend to in the interval between the annual meetings, and it shall be their duty to report such action as they may take to the next regular meeting of the association.

ARTICLE XI.

CHANGE IN CONSTITUTION.

This constitution shall not be changed except by a vote of two-thirds of the members at a regular annual meeting held one year from the date on which the proposed alteration or amendment has been first presented.

 BY-LAWS.

- (1) The time of meeting of this organization shall be fixed by the association.
- (2) Order of business:
 1. Calling the roll of membership.
 2. Reading of minutes of previous meeting.
 3. Admission of new members.
 4. Reports of committees.
 5. Election of officers.
 6. Appointment of committees.
 7. Unfinished business.
 8. New business.
 9. Adjournment.

PROGRAMME OF THE WASHINGTON MEETING.

THURSDAY, NOVEMBER 9, 1905, 2 P. M.

1. Address of welcome—James Wilson, Secretary of Agriculture of the United States, Washington, D. C.
2. Reply to address of welcome—C. C. James, Deputy Minister of Agriculture, Toronto, Canada.
3. President's address—J. C. Hardy, Agricultural College, Miss.
4. Discussion of president's address—George McKerrow, Madison, Wis.
5. Roll call by States and Provinces.

THURSDAY, NOVEMBER 9, 8 P. M.

6. Five-minute reports from the several States and Provinces. These reports must be written and handed to the secretary, and should contain a synopsis of the work of the past year only, including—
 - (a) Number of meetings held.
 - (b) Amount of money spent.
 - (c) Number of speakers employed.
 - (d) General plan of campaign.
 - (e) New lines of work inaugurated and carried out.

SUBJECTS FOR DISCUSSION AT SUCCEEDING SESSIONS.

7. Consolidated schools—W. M. Hays, Assistant Secretary of Agriculture, Washington, D. C.
8. Institute organization and methods—L. R. Taft, Agricultural College, Mich.; J. B. Thoburn, Guthrie, Okla.; E. E. Kaufman, Bismarck, N. Dak.
9. Institute lecturers—Tait Butler, Raleigh, N. C.; L. A. Clinton, Storrs, Conn.; C. C. James, Toronto, Canada.
10. Cooperation with other educational agencies—F. H. Hall, Aurora, Ill.; G. A. Putnam, Toronto, Ontario; W. C. Latta, Lafayette, Ind.
11. Movable schools—J. Hamilton, Washington, D. C.; A. L. Martin, Harrisburg, Pa.; J. C. Hardy, Agricultural College, Miss.
12. Boys' and girls' institutes—F. H. Rankin, Urbana, Ill.; G. B. Ellis, Columbia, Mo.; E. A. Burnett, Lincoln, Nebr.
13. Cooperation with the National Department of Agriculture—F. E. Dawley, Fayetteville, N. Y.; W. L. Amoss, College Park, Md.; K. L. Butterfield, Kingston, R. I.

PROCEEDINGS OF THE TENTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF FARMERS' INSTITUTE WORKERS.

AFTERNOON SESSION, THURSDAY, NOVEMBER 9, 1905.

The association was called to order at 2 o'clock p. m., in the National Hotel, Washington, D. C., the vice-president of the association, E. A. Burnett, of Nebraska, in the chair.

The Secretary of Agriculture, Hon. James Wilson, was introduced and delivered an address of welcome as follows:

ADDRESS OF THE SECRETARY OF AGRICULTURE.

LADIES AND GENTLEMEN: It is a pleasant duty and a high privilege to come over here and meet you who are engaged in this great educational work, coming from many States and Territories of the Union, and also our brethren from Canada.

The growth of agricultural education in our day has become very marked, and has exceeded everything that preceded it throughout all the ages of education among mankind. In old times, when I was a boy, I remember going to the old-fashioned farmers' club that probably is antecedent to most of the efforts that are being made to help the man who works in the field with his coat off, and there is the most wonderful difference between what was said and done in those old-fashioned farmers' meetings and what is being done now in our great educational associations along these lines. We have not very much in our libraries pertaining to the past. You take the reports of the Department of Agriculture when it originated, away back in the Patent Office, and while they are to some extent instructive, and to some extent entertaining, yet they are exceedingly different from anything we have now, and if you look over the reports of the agricultural societies of our States in early days, and of the Old World, you will be surprised again at the simplicity of the subjects discussed, and to see how very little that seemed to be the result of research is found in that old literature.

It is very different now. We are organized along a good many lines, all of which it is not necessary to enumerate, the work in which is for the benefit of grown up farmers, adult people, farmers who have not time to go to school. Through progressive agriculture to-day you do something for them that is not done as well in any other way. I find that our States and Territories are nearly all organized. There are farmers' institutes found everywhere in the land now, and the farmers' institute lecturer goes as a missionary from the fountain head of agricultural information, and discusses matters that pertain to everyday life on the farm, in the field, in the dairy, and in the feed yard, and wherever science is important in making the farm more valuable. This was not done in the old days for the reason that in the old days there was no research. That is where the difficulty was. Now we have several lines of research in most of the countries in the world. There is no royal road blocked out with regard to the education of the farmer along those lines, but different countries are going in different directions in this regard. Away back in 1862, when agricultural colleges were endowed in the United States by act of Congress, there was a new departure taken as regards the education of very nearly one-half of the people. Forty-two per cent of the people in the old United States lived by farming—of all the people now under the American flag about 50 per cent live by farming—and until late years, until within a time well remembered by all of us here, there had

been no systematic effort made to educate that half of our people in economic lessons, or to prepare them for making the day's work go further, or for making the acre yield more. That is the date to which we look back as the beginning of a new era for the American farmer. Some of the States in the Union had organized before that time, but a great impetus was given then, and the measure of success we have had has depended entirely on the march of education, on the men in those several institutions in our States and Territories to do this work. We have had to be patient until our teachers became educated—educated themselves; until the colleges had time to work and produce a class of men who could give instruction along these lines, as in contradistinction to instruction along literary lines very rapid progress is being made now.

The Department of Agriculture, another educational institution, is here now in obedience to the demands of the waiting farmers of the United States. The old Grange was organized for purposes pertaining to social life, and what pertains to the best interests of the farmer all along the line, and brought a powerful influence to bear upon American farm society. Eight years ago, I remember, when I came down here to associate myself with the gentlemen in the Department of Agriculture who had charge of this work, I came with the full intention of doing all in my power to help strengthen the State organizations to make the Department of Agriculture useful to the State organizations—to make the Department of Agriculture subservient to the best interests of research and education within the several States and Territories of the Union; but I overlooked at that time what was well known to others, but was comparatively new to me, that the Department of Agriculture could not be developed and enlarged and strengthened by applying to the educational institutions of the land for men educated to do its work and carry on its researches. And so we have found it necessary to train men in the Department, and to that end between five hundred and six hundred young men, mostly graduates of colleges—preferably of agricultural colleges, when we can find them—have been brought into the Department and given facilities for instruction along post-graduate lines, and put in small parties under our trained scientists in order that they may become valuable in carrying on our work. That policy has been carried out in regard to all the bureaus of the Department. Take one of the oldest—the Weather Bureau. No institution in the land was paying any attention in those days to the education of any number of the American youth along meteorological lines. It became evident to us in the Department that we must have some beginnings made with the young people to train them along those lines if we ever expected to increase our knowledge of meteorology to the point of making it an exact science, and so we have instructed our observers, located in the neighborhood of State institutions, universities, and independent colleges to give lectures to students; and now we have twenty men in the great institutions of the country lecturing to students along those lines. So that we have hopes of having scholars in the land in future along those lines. Thus we have encouraged education along the several lines of the work we carry on in our Department. This, however, is familiar to you gentlemen, but it is illustrative of the necessity for education along agricultural lines. In many directions there is no calling upon earth that requires a man to be so well educated as that of agriculture. We have begun a new work in our day. None of the institutions of the country formerly paid any attention to the soil of the country. If there was one which did I do not know where it was. I may have heard of it, but I do not remember where it was. We have organized a bureau now to study the soils of the country, that is maintained to obtain as great a result as possible for the benefit of the people who till the soils, to learn what the soils will do best, and in what direction they can be most helpful to the tillers of the soil, and to find out what crops will grow best on the several soils; and we are doing that all over the United States. In short, wherever the farmer needs help we endeavor to train somebody to help that man, if we have not anybody trained now. That man's cry to us for help is never forgotten. If we have nobody fit to help him out to-day, then it is high time we were getting somebody prepared to help him; and so we are working along those lines in the West and the North and East and the South. If the farmer needs help, the policy of the Department is to help him, and to give the law-making power, the power that makes appropriation, no peace until he gets it.

I might say a word of our visiting brethren from Canada as an illustration of the extent to which our interests and theirs are bound up together. I was thinking about the well-being of our people along the northern tier of States sometime ago, and I found they were growing a crop of wheat once in every two years, and leaving the land fallow half the time; and the crop once in two years was getting less and less. It occurred to me, "What can we do to help those people to do better than that?" People in Europe did something of that kind a century ago, but no intelligent farmer there thinks of summer fallowing nowadays. It occurred to us that it

might be wise to ascertain what people did in the Old World along the lines of agriculture where the conditions are similar to those found on our northern border, and so we sent explorers to Norway and Sweden and Finland, to places where people had lived for thousands of years, and people can not live without growing crops and keeping domestic animals. We wanted to find out what crops those people had. I confess that I was not thinking of our friends in Canada, but I think when we get those things here the Canadian people may be interested in some of them, because they are still farther north than we are. Then we sent an explorer to the other side of the world, and told him to go up along the Yang-tse-Kiang River, and go away up to the foothills of those great mountains where people have lived, that we know of, for thousands of years (because we have the history of the Chinese people for that length of time), where the peach and the chrysanthemum originated, to find out what legumes grow there and bring them to us, so that we could send them to our northern tier of States, and to bring us the vegetables and fruits and everything else, so we could help our farmers up there; because some day the people of North Dakota are coming down here to ask us what they will grow in the off years when they can not grow wheat. Of course anything we get which will be of benefit to the people under the American flag will be quite as freely extended to our brethren on the north side of the line as to our own people, because we really keep no secrets and hold nothing back from anybody. I recollect when I was called to the directorship of the Iowa station in 1891 the first thing I did was to go up into Canada and steal every idea I could lay my mind on and bring it down to the State of Iowa. So we are under some obligations to those Canadian people.

The matter that is uppermost in the minds of educators along the lines of agricultural science is with regard to the education of our young people in the common schools and in the secondary or high schools. I was delighted to meet the other day Sir William McDonald, of Canada, a gentleman who has done what I never heard of being done in any other country on earth. He gave a quarter of a million dollars to introduce the elements of agriculture into the common schools of Canada. Think of that! We have people in the United States who give. They give as much as ten millions at one time for educating along this line and that line, but it never has occurred to anybody in the United States to endow education in the primary and secondary schools. The farmer has been supposed to be a fellow who had a place, and it was probably best to have him just stay in that place. It has not occurred to anybody that it was best to educate that man; and yet it is. Two things which have just come to my attention, one of them mentioned to me by one of our scientists, illustrate that. The people down in South Carolina, on their great river bottoms and seacoast lands, have been growing one of the finest rices in the world for many years, at a great profit. But lately a portion of those lands have refused to grow rice. Disease has come, and they have gone to growing weeds. Well, the fact that they grow weeds is a hint to any man who has any knowledge of research. Wherever weeds will grow we can grow something that is useful. So they asked us to see if we could not do something with regard to the cause of failure of rice on those lands that seemed to be so rich that there is no limit to it. We sent our crop experts down there, and, in cooperation with the experiment station pathologist, began making studies, and we got the cause of the trouble finally. After two years' work it was found that those rich lands had become too sour in places even for rice. Heavy liming was tried, and the experimental fields thus treated grew abundant crops. This indicates that those lands may be brought back into bearing again. A very simple thing, but it did not occur to the rice growers and they were nearly ruined. Plans have been made to make big practical farm tests of the results of these experiments. New crops of promise have also been introduced.

Now, the other thing that has just been brought to my attention is also a very simple thing. We have an apple known as the Albemarle Pippin. One of our ambassadors at the Court of St. James away back in the olden times gave Queen Victoria a barrel of those pippins, and she was so delighted that she sent for them every year after that. But the trees were attacked with what is known as the bitter rot, and the people lost the crop. They sprayed for it, but it did no good; the bitter rot took the whole crop. Finally it occurred to our pathologists that they did not begin spraying soon enough, and that they ought to begin before the leaf comes out. So they began with a large orchard early in the spring in that way, they sprayed throughout the whole summer, and they saved the entire orchard. That means much to the people who grow the Albemarle Pippin. These are simple things, but it requires men of training and observation to do this kind of work.

The attention which the Department has given to irrigation has possibly led to the adoption by the United States Government of the most magnificent system that is designed to use the surplus waters of all those great rivers in the western half of the

United States for growing crops and making homes where people can live and raise families and live in comfort and happiness. All those lands are exceedingly rich, and our Department has done a good deal toward indicating what can be done with them. One feature of our work is to grow crops where you can not put water. It is a simple thing to grow crops in that rich soil if you can get water, but it is an entirely different thing to grow crops above the ditch where you can not get water; and many, many millions of acres in the United States are in that condition. Our explorers a few years ago searched the Old World for crops that would grow in a light rainfall, say 10 inches. They went to the dry lands of Russia and the dry lands of Algeria, and they found crops that had been grown in light rainfall there for many years, for so many years that history could not tell us anything about it. They brought them out here to our dry lands. I can not go into the details of the experiments, but this year we will have probably twenty million bushels of wheat grown above the ditch, where water can not be got to it, which will be used for making bread. We are using it every day in the city of Washington, and you are eating it now, but you do not happen to know it. It is as good as the bread we get from the rainy country wheat, and it is richer in protein and the muscle-forming ingredients. Wherever we find that the American farmer is needing help, we go there and see what can be done for him. There is nothing really the matter with any acre of land I ever saw, but there is a very great deal the matter with us. We do not know enough. Wherever you see an acre of land growing anything, that is your hint, and it is our business to find out what will grow that is beneficial to the owner of that land. These are the lines along which we are working. And now our institute worker goes to the agricultural experiment station and to the agricultural college, and the Department of Agriculture gets the results of this research and takes it out to the farmer, to the practical farmer, to the man who is making his living by farming, and helps him to better methods and more profitable ways of managing his crops. That is your field. It is your business to know everything that is being done by the man who experiments and observes and makes research. It is your business to become possessed of all of the results of work along every line of agriculture, and then to go out in the field and get farmers together and put practicality in their hands and in their minds new ways and facts, so that you strengthen them; and consequently you become missionaries for that purpose; you become the most powerful medium we know of. The press is doing much to help along with the dissemination of discovered truths in agriculture, it is doing a great deal in newspapers and magazines and books, and we have come to the time with our college men and our station men when agricultural men are putting on the market text-books which twenty years ago nobody could have had. And so, as I remarked a while ago, what is uppermost in the minds of educators along agricultural lines is the getting of the young fellow from the farm in the common school and secondary school headed toward the farm, instead of away from it. There are no well organized opposers nowadays of an agricultural education. What opposition may have existed has been given up. The farmers are organizing, and I am watching with intense interest the organization of farmers for the purpose of protecting themselves against those who have heretofore preyed upon them. There is no declaration of independence that is more valuable than just that. A community of farmers grow a great crop. The world needs that crop; the world must have it. In old times the law of supply and demand regulated the price. In modern times combinations of people who neither grow nor spin nor consume the crops are organized for the purpose of making all the profit possible from them. The farmers have bethought themselves that they are interested in a peculiar degree in the growing of those crops, and I have no doubt at all but that the price of crops will be arranged amicably in the future so that the men that produce them will have their remuneration. I do not want to take a demagogical position with regard to anything, but a lively illustration comes to my recollection just now. Some years ago the price of beef went up very rapidly. It was not doing so much good to the people who grew the beef, but the people who consumed the beef felt it very keenly. A newspaper man asked me if the packers were altogether to blame. I said, "Probably not; I think the middleman may have something to do with it; the retailer may have something to do with it, possibly." A man here in Washington, a retailer of beef, took me in hand and gave me a very thorough talking to, and exposed my ignorance, and told the world that all the profit that he had was 40 per cent on the beef he sold.

Now, I do not see any particular necessity for anybody having such an enormous profit between the purchaser and the consumer. If the old law of supply and demand had been let alone—it was a comfortable old law, and writers on political economy, like Adam Smith, built magnificent structures on the top of it; but it is all gone. [Laughter.] The law of supply and demand does not exist any more in regard to many things. It is a question of giving the farmer just enough encouragement to go on and grow crops, and those who neither grow the crops nor consume

them want to make the money out of them. I do not imagine that the people who consume these crops get any more out of it than the people who grow the crops. The difficulty is with the fellows who want to intervene.

Gentlemen, I make you heartily welcome here to the city of Washington. This is the political center of our country; it is the scientific center of our country; it is rapidly becoming the social center of our country. It is growing rapidly. We American people have a good deal of pride in it. I might say, also, that this is becoming the great convention city.

I hope you will enjoy your visit here and take away pleasant recollections, and if there is anything we can do for you over in the Department to further your work, all you have to do is to call upon us.

F. H. Hall, of Illinois, delivered the following—

REPLY TO ADDRESS OF THE SECRETARY OF AGRICULTURE.

We appreciate, surely, the words of welcome that have come to us from the Secretary of Agriculture. We expected it. It is on the programme. He is our Secretary and we are his agents. In a sense we are members of his official family. He welcomes us to Washington, and we welcome him to this meeting. We are especially pleased that he has given us a clearer idea than perhaps some of us have had before of the work of his Department. We know now, what some of us believed before, that the source of life of the farmers' institute is not the agricultural college, and surely not the college of literature and liberal arts, and it is not the common schools; it is the Department of Agriculture and the experiment station. There never were such farmers' institutes as we have to-day until after the Hatch bill passed Congress in 1887. That was the beginning of these better things.

The old-fashioned farmers' institute in which farmers met and exchanged opinions may have had some life, but it is not to be compared with the institute of to-day in which we attempt to bring the farmer himself into touch with the experiment stations and the Department of Agriculture. President Roosevelt said, and the Secretary has said the same thing here to-day, that nearly one-half the people in this country are devoting their energies to producing things from the soil. And surely it is high time that we devote some thought to the special education of that portion of our population. President Roosevelt says, also, that the Department of Agriculture is a great educational institution. Do the people over the country know this? Do they all of them know it, or many of them know it? The Department of Agriculture is a great educational institution with a faculty made up of more than two thousand specialists, and expending millions of dollars a year to find out things for the farmers, and not one farmer in a hundred is in touch with that work. The primary work of the Department of Agriculture, as it is now organized under the Secretary of Agriculture, is discovery and investigation, and the secondary function of the Department of Agriculture is dissemination; and I have heard Professor Hamilton say that dissemination does not keep pace with the discovery. We are those who are engaged in dissemination. That is our special work. I have heard Professor Hamilton say that the scientific agricultural knowledge that we now have is, as it were, a great reservoir full to overflowing, with pipes leading thereto that are pouring in an additional mass of knowledge constantly, but the mains from which have scarcely been laid. It is our business to help lay the mains. It is our business to encourage the sentiment that will get the right of way to lay the mains. It is our business to lay also the laterals into every school and home in the country. President Creelman said once that the farmers' institute has done more to help the farmers of the United States and Canada during the last ten years than any other agency. I believe it to be true. How has it done it? Simply by bringing the farmers to some small extent into touch with the experiment stations and with the Department of Agriculture. That is the way the work is done. It is done by creating a sentiment that would teach us and educate us all along the line to do what people never thought of doing before. What has it done in my own State of Illinois? It has created a sentiment that made it possible to get a legislative appropriation of \$150,000 to erect a building in which to do our work. It has created a sentiment that makes it possible to appropriate every year \$25,000 for the study of our soil, \$25,000 for the study of beef production, \$15,000 for the study of horticulture, \$15,000 for the study of dairying, and \$15,000 for the study of growing corn, wheat, oats, and clover. The members of this association are people who have been connected with this for a longer time than I have, but anybody who will look at this matter will find that the farmers' institutes have made the sentiment which has made all this possible.

That is not all. We are making a sentiment that will make consolidated schools possible. We are making a sentiment that will carry elementary agricultural science

into every common school in the land. We are making a sentiment that will put agricultural science into the high schools, and articulate the common schools, through the high schools, with the agricultural colleges, and also with the schools of science and the liberal arts. We are making a sentiment that is helping the new education.

Do we know what is the new education? What is this wonderful change which has come over us as to what education is for? Education is, in the minds of many leaders, no longer for the purpose of producing simply enjoyment, even though it be of the higher intellectual sort. It is no longer to bring about a kind of philosophic leisure. It is now for use. It is to help young people to do things that need to be done. If it is not for use, it is useless. And almost all over the country, from Doctor Eliot of Harvard to Doctor Jordan on the other coast, the leaders are asking for the education that will reproduce itself in the power to do something that needs to be done; not only the power but the disposition—the desire and the power to do useful things. I think that in our own university a few days ago, when President James was inaugurated, we heard the keynote of the new education. I have here a copy of a few words that he spoke, and I am going to use those words in every county of Illinois this winter. I will read them here. I say they are the keynote of the new education, the education for which the farmers' institutes stand. He says:

"In a word, the State university which most fully performs its function for the American people will stand simply, plainly, unequivocally, and uncompromisingly for training for vocation; not training for leisure, nor training for scholarship, except as training for scholarship is a necessary incidental to all proper training for vocation, or may be a vocation in itself."

This is the doctrine of the new education, and the farmers' institutes are helping forward this movement, and they stand ready to help for this reason, that nearly half of the people in this country devote themselves to producing things from the soil. And because we stand in a position to help that one-half of the people we are in a position to help forward what I call, as I think properly, the new education, education for useful activity.

And now, in conclusion, I beg to assure the honorable Secretary that we thank him for his words of welcome and his unmeasured helpfulness in our work.

Prof. E. R. Lloyd, of Mississippi, read the annual address of the president of the association, J. C. Hardy, as follows:

PRESIDENT'S ADDRESS.

LADIES AND GENTLEMEN OF THE AMERICAN ASSOCIATION OF FARMERS' INSTITUTE WORKERS: In behalf of the association I desire to express to the delegates from Louisiana our deep regrets at not being able to meet at this time in their beautiful capital city of Baton Rouge. Personally it has been a great disappointment, and in order that the anticipated pleasure may not be lost forever, I do now put in nomination Baton Rouge for our next place of meeting and hope that at the proper time a motion to this effect may be unanimously adopted.

I desire to discuss for a short while, upon this occasion, "Federal support for farmers' institute work."

It seems to me that the time has come when the real value and importance of this movement should be brought to the attention of our national lawmakers, whose beneficence and generosity have done so much for our agricultural colleges and experiment stations and through them for the agriculture of the entire nation. The executive committee of this association, realizing the necessity of a closer organization within itself, have recommended the appointment of some permanent committees to do continuous work along certain lines from year to year, and I can not too strongly urge the adoption of this recommendation, but, in my judgment, it is infinitely more important that the work as a whole should be put upon a broader and more permanent foundation by being unified, nationalized, and supported by Federal appropriation. If agricultural and industrial education is a national question and deserves the support of national appropriations, how much more so are the problems and questions with which this association is dealing? If it is of national importance that the hidden and dormant forces of nature should be discovered and brought to light, of how much more importance to the nation is it that these forces and laws thus discovered should be applied and utilized, not only for the betterment of the individual, for the upbuilding of the State, but for the strengthening and enriching of the nation?

No one can read the able reports of Secretary Wilson, our leader in agricultural thought and action, without being impressed with the importance of agriculture from

a national standpoint and without realizing more than ever before what a debt of gratitude the whole country owes to the American farmer for maintaining our trade balances which are so essential to American prosperity and independence. One of the purposes of the farmers' institute is to increase the production of the country by inducing the farmers to put in practice that which has been worked out by the experiment stations and proven worthy of being incorporated in the industrial life of a people.

I have never believed in "art for art's sake" and "knowledge for the sake of mere knowledge." I believe that every art was intended to be applied either for the pleasure or the profit of the human family. It is a good thing to know the truth, provided you use the knowledge contained in the truth. The architect's conceptions contained in the plans and specifications of great and beautiful buildings, such as we have here in the capital of the nation, are valuable only after master builders have given them form and substance. The thought in the mind of Justin S. Morrill that was destined to revolutionize the educational conception and practice of the country could accomplish nothing until embodied in that memorable act of 1862 which called into being the land-grant colleges in every State and Territory of the Union. There is no one in all the land who appreciates the work of the experiment stations more than I. As president of the Mississippi Agricultural and Mechanical College, I give the director of our station and his corps of workers all of the cooperation and encouragement that lies within my power in their search after the hidden and unknown laws that God intended should be applied by the farmer of my State in working out for our Commonwealth a safe, sane, and sound system of agriculture. Then, realizing as director of farmers' institutes that the laws thus discovered and the forces thus brought into light are worthless without being applied, I send these same men, together with others with equal power and ability, to induce the people of my State to put into practice that which has been worked out by our investigators. The men who are doing all within their power to induce the farmers to apply the laws that have been discovered by the investigators are doing a work of equal importance to that of those making the investigations and a work that is even more pressing, for practice is many years behind knowledge. Who can realize what it would mean to the country if every farmer in the land could be induced to apply the knowledge that the experiment stations have worked out and published during the past fifteen years at a cost of more than twenty millions of dollars?

Mr. John Hamilton, our Farmers' Institute Specialist, who has done so much for this association and for the cause it represents, in an address before the farmers' institute workers of Pennsylvania last year, gave some figures that I am going to take the liberty to quote, for they illustrate the force of the above observation and of the value of the work we are doing. He said:

"If a sufficient force of teachers of agriculture were at work constantly in each State instructing farmers and demonstrating the value of new crops and new methods, the production of the country would speedily be greatly increased. Five dollars added to the value of each dairy cow would increase the wealth of the farmers of the United States over \$90,000,000. Two dollars added to the value of each of all other cattle would increase it by over \$100,000,000 more. Ten dollars to each horse would increase their income by over \$213,000,000. Thirty eggs added to the annual production of a hen, whose average yearly output is now but 66, when it might be 200, would add over \$64,000,000. One pound to each chicken at 10 cents a pound would amount to over \$23,000,000. One-fourth increase to the present product of fruit would amount to over \$19,000,000. One-third added to the present product of potatoes and grain would be more than \$524,000,000. One-third added to the staple products would amount to over \$306,000,000, and with like additions to other crops and animals not enumerated, would reach a total of \$1,442,419,469, all added to the present product and all going into the farmers' bank account."

And he might have added, to the bank account of the nation itself.

Upon such a showing as this, surely we are justified in behalf of the isolated farmers, who stand so greatly in need of such help, as was so forcefully pointed out by Mr. Hamilton, but whose forces are too scattered and weak to be heard at the national capital. I say surely upon such a showing as this we are justified and more than justified in asking of our lawmakers, who hold the purse strings of the nation's wealth, thus so greatly augmented by the application of scientific and intelligent methods, that they place the farmers' institute work of the country or the work of application upon the same footing as they have placed agricultural education and agricultural investigation, by making a liberal appropriation for its support in every State and Territory of the nation.

The agricultural prosperity of a State or nation depends upon three great forces—agricultural education, agricultural investigation, and agricultural application, which

three forces are as interdependent and as triune as the body, mind, and soul. Hon. Justin S. Morrill, who immortalized himself by being the author of the act of 1862, which made him the father of the land-grant colleges of America, certainly had in mind these three great forces, and certainly intended the agricultural and mechanical colleges to perform the three functions of education, investigation, and application. He certainly intended them to be more than institutions of pure science, for his very purpose was to differentiate them from institutions of the general science and classical type, by making them technical or institutions of applied science.

President Thompson, of the Ohio University, in discussing the mission of the land-grant colleges before the Association of Agricultural Colleges and Experiment Stations at its session here two years ago, said:

"Mr. Morrill's argument in support of the bill was chiefly from the side of agriculture. He presented statistics showing that the conditions of agriculture in many regions were growing less favorable and that the products of the soil were decreasing to such a degree as to endanger the perpetual prosperity of that great industry. The decrease in the number of animals and somewhat widespread discouragement in the older States led him to make a strong plea for such provision as would eventually prevent the exhausting of the soil and maintain the permanent prosperity of the farmers."

This was the work that was to be done by the colleges that Mr. Morrill was seeking to establish. He conceived this work to be of national importance and deserving national support, and who in all the land now doubts that he was right or denies the wisdom of his course?

It soon became evident to the thinking and observing men of the country that the one college organization could not do the work intended, and so the conception of the work expanded and gave birth to the experiment station as an adjunct to the college. The Hatch act of 1887 gave them a distinct organization and made what was thought at that time ample provision for their support. And who now doubts the wisdom of this act? No intelligent man can be found who is not proud of the work that has been accomplished by the experiment stations of America. But as excellent as has been their work, I am sure that much more would have been accomplished had there been a clearer conception of the specific functions that the experiment station was intended to perform. The Hatch act was intended to create a distinct instrumentality for the accomplishment of a distinct work. Otherwise it might have been styled "An act to still further endow the land-grant colleges." The purpose of the act was not to enable the colleges to strengthen and extend their work such as was accomplished by the second Morrill act of 1890, but was to give them an additional organization especially adapted for making investigations and experiments, a work which the college as a college is wholly unable to perform. The work of the college is one thing and the work of the experiment station is another. My position is that just as in the fullness of time it became necessary to differentiate the work of the college by evolving the experiment station as a separate organization with a separate endowment, the time has come when the work of the experiment station should be differentiated and when there should be evolved a separate organization, to be known as the farmers' institute, and supported by Federal appropriation. It is perfectly clear that when the Federal Government appropriated more than 11,000,000 acres of land for the support of the land-grant colleges, it was intended that a part of their work should be that now being done by the experiment stations. It afterwards became evident that the work could be better done by two organizations than by one; and as a result of this conviction the Hatch act was framed and passed, calling into existence an experiment station in connection with every land-grant college in the country. I believe the time has now come when the work mapped out in the Hatch act can be better done by two organizations than by one. The question of putting the farmers' institutes upon a national basis and supported by Federal appropriation does not involve a new principle, does not require an extension of power on the part of Congress, for the very work that the farmers' institute would do in an organized, consecutive, and efficient way is now being done by many experiment stations and colleges to a small extent, and only at such times as least interferes with their regular organized work. Their regular organized work is growing and expanding to such an extent as to require all of their time, money, and energy. The question then reduces itself as to how the work may be done the most efficiently and the most economically.

It is a question of organization, for as before stated the work is partially being done by the experiment stations and is being paid for by the Federal Government. That the work is important and should be continued is known to all intelligent citizens. To emphasize this point, I quote from Dean W. A. Henry, of Wisconsin, who said in his address before the Association of Agricultural Colleges and Experiment Stations at its meeting in New Orleans in 1893:

"One reason that every earnest, faithful, working experiment station has a strong hold on the agricultural people is because its workers have met the farmers at the institutes and farmers' club meetings for frequent conference and have given instruction through the agricultural papers, acting in no small degree as teachers and counselors. It is true that when a station worker is on the institute platform or addressing a farmers' club he is not investigating, and when he is writing for the agricultural press he is not doing laboratory work, but the call for help from our farmers has been so great and their appreciation so marked that it has been impossible to escape it. With earnestness on both sides and a desire to give and receive help, the most cordial and close relations now exist in a number of our States between the experiment stations and the intelligent farming people. To be frank with you, I believe that our station workers have in many cases accomplished more good for the cause of advanced agriculture through their efforts at instruction than through all they may have discovered."

Dean Henry has given us the whole problem in a nutshell. Discovery, investigation, or experimentation can accomplish nothing unless they be followed by instruction that has for its end the application of the results to the industrial life of the people. I repeat: It is a good thing to discover, but it is a better thing to make use of the discovery. It is a good thing for the legislature to make good laws, but those laws are absolutely useless unless executed.

Just as one of the most pressing needs in our political or civil life is the execution of the laws on the statute books, so in our industrial life—that is, in our agricultural life—the most pressing need at this time, it seems to me, is the execution of the successful experiments now embodied in our station bulletins. The law requires that the results of the experiment stations shall be published in bulletins and sent out to the people. Why this requirement? It is because the very purpose of these experiments is to give the people something that will help them to improve their agriculture. Are the masses of the people capable of interpreting the results as tabulated in many of the bulletins that come from our experiment stations? Is it possible to stimulate agriculture and to arouse the people to the importance of the many problems with which they have to deal by means of experiment station literature? I am not making an attack upon the literature that comes from our stations, for there is no man in this country who believes stronger in the stations, or who has more confidence in their ability to solve the problems with which they are confronted than your speaker; though I do think that they should issue more popular bulletins, and make all of the bulletins less technical. The workers of the stations should always realize that their work is primarily for the farmer and not for the general benefit of science, and when they write the results of their work they should ever keep in mind that they are writing primarily for the benefit of farmers and not for the benefit of scientists. They should be more concerned that the farmers should think well of their work and writings than about what judgment the scientists of the country might pass upon them. But even with perfect literature the results would still be far from satisfactory. As well expect political battles to be won by circulars and glaring headlines in the daily papers, or the world to be converted by tracts and religious literature, as that the battle of progressive agriculture should be won by experiment station bulletins.

Just as the living, breathing preacher, charged with the Spirit of the Holy Ghost, is necessary to bring conviction to the minds and hearts of the sinners, and just as the fiery political orator is necessary to enthuse and arouse the voters, so is the living institute worker necessary to accompany the bulletins and to meet the people face to face and to interpret to them the facts that have cost the Government millions of dollars to bring to light. I believe the work of the agricultural college, the work of the agricultural experiment station, and the work of the agricultural institute are all one, and that they can not be divided without serious injury to all. I believe each should have a separate Federal endowment with separate heads, but all under one board and one management, in order that there may be perfect unity and harmony and the best possible cooperation. I am not criticising the arrangements that exist now in the various States, for the work has been initiated in the different States under different circumstances and has been shaped by the different forces that called it into being. This has all been an educational process. It would have been exceedingly unwise to have put the burden of maintaining this work in the different States upon the colleges and experiment stations. But has not the time arrived now when the National Government should come to the relief of all and endow this work just as the college and station have been endowed? In my judgment the work is of equal importance, and in many respects more complex and pressing.

With the agricultural college standing for general agricultural education and for the training of the leaders of agricultural thought and action; with its influences

permeating every nook and corner of the State, inoculating the teachers of the public schools with the spirit of industrial education; with the experiment stations manned by men especially adapted to investigating and to experimenting, and relieved of the greater amount of teaching that they are now required to do, and of all other additional work that interferes with the continuity of their efforts; and with the farmers' institutes as connecting links between them and the people, to keep them in touch with the people and the people in touch with them, and seeing that not only no force generated by either is unused by the people, but that every progressive movement of the age shall be appropriated by them as far as the forces are adapted to their needs and conditions—I say, with these three organizations working in harmony for the uplifting and the betterment of our agricultural communities, the time will speedily come when, with good public roads and beautiful rural homes; with telephones and free rural delivery, with all that they bring; with the universal use of improved agricultural machinery and labor-saving implements; with the soil restored to its virgin fertility and its greater yield of produce and wealth; with improved live stock and up-to-date plant breeding; with splendid public schools and churches in every community of the State, agriculture will take its rightful position of dignity and importance, and the country will contain the refinement, the culture, and the wealth of the land. Our city population will cease to be congested, and the ambition of every rightful-thinking man will be to live in the country, though he may have accumulated his fortune in the city. The problem of keeping the boy on the farm will be solved, and American civilization will become stronger and stronger, being based upon progressive agriculture.

Congress has recognized to a limited extent the claims of this work, and for the past several years has included in the agricultural bill an item for the salary of our Farmers' Institute Specialist. Since Congress has recognized the principle of helping this work, and having recognized the claims of the work, I feel sure that there will be no trouble whatever in showing that body how inadequate is this help. Until the work is placed upon the basis of a separate endowment, as outlined above, which I hope and trust will be at an early date, the Secretary of Agriculture should have at his disposal at least a dozen men who should give their entire time to the work in the different sections.

I therefore recommend that this association appoint a strong committee to present this matter to Secretary Wilson and to urge that he ask of Congress a sufficient appropriation to place the work upon a progressive basis.

I recommend that this association appoint a committee to suggest before this meeting adjourns the number of standing and working committees that this association should have.

I recommend that a committee be appointed to consider the advisability of asking for affiliation in the Association of Agricultural Colleges and Experiment Stations.

FEDERAL AID TO FARMERS' INSTITUTES.

F. H. STADTMUELLER, of Connecticut. Federal aid to the agricultural colleges and to the experiment stations is justified on various grounds. I can not agree with the remarks of the president of our association that the institute work is analogous to those two features or to those two classes of work. In other words, is the institute work restricted to more purely local issues? And if that is so, have those little circumscribed localities the right to bother and pester the United States Government for aid? I would be rather opposed to national aid to the institute work, with the possible exception of perhaps extending the aid along the lines of assistance in carrying out the work that has been suggested by the Farmers' Institute Specialist, Mr. Hamilton; and that is the gathering together, the grouping, of sections of the country, to get the educational men or institutions to provide a sort of normal school for the training, for the development, of institute people. I would not hesitate at this time to oppose any further national aid than might be necessary to cover that ground.

WESLEY WEBB, of Delaware. I think this recommendation for the appointment of a committee to take action to establish an affiliation between this organization and that of the Association of American Agricultural Colleges and Experiment Stations is a very good one, and I hope that action will be taken tending in the future to establish such relations.

G. A. PUTNAM, of Ontario. We have of course the same question before us as you have, that of more money; and it matters little whether it shall be the State government or the Federal Government which supplies that money.

During the past years at these conventions of institute workers very complimentary things have been said regarding the work which we are doing in Ontario, both in connection with the farmers' institutes and the women's institutes; and back of all that one of the great forces has been "money," or at least all the other forces we have would have amounted to very little if we had not had the money. So that in speaking of this question I would say to you, "get more money, by some means."

I wish to express my approval of the plan of central schools for institute lecturers, as outlined by our specialist, Mr. Hamilton.

We have one difficulty in our institute work in Ontario, and that is that in most of our audiences we have two classes to cater to, namely, the men who have attended institutes for several years and the men who are probably attending their first institute meeting. Those men who have been there several years, and followed the work, demand instruction along scientific lines. The questions that they ask indicate that they have been reading the reports and have been studying, and they do not want mere facts thrown at them; they want to inquire into the latest scientific investigation. But if we cater wholly to those men, then there are a large number of men who do not know even the rudiments of agriculture, who will not be benefited. So that it appears to me that we may have to do away with the one-day meetings and introduce more two-day meetings; and in that way we may be able to overcome the difficulty.

W. R. DODSON, of Louisiana. There are a great many admirable things in the president's address, but there is one thing that ought not to be passed without some expression of protest from those who differ. President Hardy says that the scientific investigator should think more of making the results of his investigation of value to the farmer, and pay less attention to what scientific men should say about his results. I believe he is wrong there. I think the first purpose should be for a man to find out that he is absolutely on firm ground, and if any scientific man can tear down anything he has done or said, then his work is incomplete and it is not going to be of great value to the farmer until he has discovered the truth. In scientific work the same thing holds true that holds true with regard to a witness on the witness stand. We are told that if a man sticks rigidly to the truth, it is impossible for him to contradict himself; and in scientific investigation, when a man has got on the solid rock of truth, he is going to stay right there and nothing can tear him down; and his first care and first concern, I think, should be that no scientific man can upset him. And then the second object should be to make that truth applicable to the farmers' needs.

It should be the experiment station worker's first purpose to do research work. It is seldom that the best investigator is the most efficient man to disseminate the knowledge he develops. The man that can best disseminate knowledge is seldom the best man to discover knowledge, and when we too strongly emphasize the teaching or institute phase of the station employee's work, we weaken his power of discovery.

A. C. TRUE, of the Office of Experiment Stations. The address of the president of this association has brought to my mind certain things which have been very strongly impressed upon me of late. I was present the other day at the ceremonies in connection with the installation of President James at the University of Illinois. At that time, as many of you know, the degree of doctor of agriculture was conferred upon the first Secretary of Agriculture, Mr. Colman, of Missouri, and in connection with that occasion Mr. Colman made an address regarding the work which he did in the Department of Agriculture. It was brought out in that way that the work of the Office of Experiment Stations began just about the same time that we had the first

Secretary of Agriculture, and since that day there has been almost the entire development of the system of agricultural experiment stations, about which so much has been said here this afternoon. Now, it happens that I have had some little part in that work since that day, having received my appointment in the Department of Agriculture from Mr. Colman, and so I have been able to see the different stages of development through which the movement for agricultural education and research in this country has passed, and I have had, in my official capacity, to stand rather strongly for the idea of differentiation of functions. This was necessary because in the earlier days there was so much confusion of mind, even among those who dealt closely with these matters, that there was great danger that the funds for agricultural instruction and the funds for agricultural research would be so thoroughly mixed that the true purposes of neither would be really subserved; and so it has fallen to my lot to stand as firmly as I could for the idea that the experiment station must be essentially and primarily an instrument of research, and that the agricultural college should, on the other hand, stand for agricultural education of a high type.

I think it is clear to those who have looked into this matter that such a policy has borne good fruit, because through the efforts which were made by the friends of these institutions as they came to understand the situation, the agricultural experiment stations have so far been held to the work of research that a very large body of new truth on agricultural subjects has been collected by these stations, and the body of truth thus gathered together has formed the basis, and the only sound basis, for the system of agricultural instruction in the agricultural colleges; and thus they have been able to put their courses, which were intended to be of college grade, on a firm and attractive basis, with the result that we have an increasing body of students in those colleges who are being prepared to be the leaders in agricultural progress. And now that that has been done and the public mind is well informed, relatively, on those matters, I am sure that we have reached another stage in the development of this work. That is the one to which President Hardy in his address has called special attention, and I have been particularly impressed with the fact that the time is ripe for a decided movement along the line of the farmers' institute, and the more elementary agricultural education, as I have gone up and down the country during the past year. For in many of the States there has arisen and is rapidly broadening an intelligent desire for the enlargement of the agencies for agricultural education, outside of the agricultural college; and the agricultural college men themselves have come to see that it is not enough that we have the agricultural colleges and experiment stations teaching a selected body of youth and sending out a large amount of printed material by way of information for the people, but that we must supplement these agencies by others, which will go directly to the farmer to explain the results of agricultural research to him by word of mouth, and which will go into our public schools to there prepare the mass of our rural youth to understand, as they come into active life, what the experiment stations and colleges and the Department of Agriculture are doing for the advance of agriculture.

And so I think we have reached the time when the friends of agricultural progress in this country can do no better thing than to seriously consider what are the best means for the establishment on a more permanent and progressive basis of this great system of farmers' institutes which you represent, the extension work which the colleges are beginning to do in various lines, and all those matters which relate to the introduction of agricultural subjects into the public schools.

How that shall be done, whether entirely by support within the States, or by joint effort of the States and the Federal Government, it is not my province to discuss; but I do wish to leave with you strongly the impression that from a somewhat wide acquaintance with the movement of thought along these lines, I am sure that such a body as this association here at this time can, by its discussion, deliberation, and action, do very much to forward the movement for the more permanent and

solid establishment of the educational agencies which are to reach the masses of our farmers most directly, and I commend to you therefore the earnest consideration of this subject.

WESLEY WEBB. I recognize the importance of that work, and also the fact that some of the States, as States, are making but slight provision for it; and I recognize the further fact, which is a very important thing, that the results of the experiment station work should be put before the farmers that they may put them into practice. So it seems to me that we come to the logical conclusion that the United States Government should, through the Department of Agriculture, handle this work in the several States. Personally, I am very heartily in favor of this suggestion of the president.

After the above discussion, the recommendations contained in the president's address regarding Federal aid were referred to the executive committee, with instructions to report the same back for action during this meeting.

There being no further discussion, the meeting adjourned until 8 p. m.

EVENING SESSION, THURSDAY, NOVEMBER 9, 1905.

The convention was called to order at 8 o'clock p. m., the vice-president, E. A. Burnett, in the chair.

The following five-minute reports of the various States, Territories, and Provinces were submitted:

FIVE-MINUTE REPORTS FROM STATES, TERRITORIES, AND PROVINCES.

ALABAMA.

By C. A. CARY, *Auburn*.

During the year June 1, 1904, to June 1, 1905, the total amount expended was \$600; number of one-day institutes, 24; number of sessions, 50; total attendance, 3,820; average attendance, 151; total enrollment at the round-up institute, 245. The amount appropriated for 1905-6 is \$600.

There is a greater demand for institutes than can be supplied with the fund in the hands of the director.

ARKANSAS.

By W. G. VINCENHELLER, *Fayetteville*.

During the year our station has held four institute meetings, and has cooperated in twenty-six. These meetings were held as the result of urgent requests from the farmers themselves. The total number of speakers employed was five, and the amount of money expended on this work was \$400. The principal new lines of work taken up were dairying and animal husbandry.

BRITISH COLUMBIA.

By J. R. ANDERSON, *Victoria*.

Two-hundred and twenty-five meetings were held in the Province of British Columbia during the past year, and \$5,000 was spent on institute work. The general plan of the campaign was the holding of the regular meetings in the spring and autumn, to which experts were sent, and the encouragement of carrying on supplementary meetings by local men. The new lines of work which were brought about by material evolution were practical field work in the cultivation of the soil, management of orchards, judging of animals, animal surgery, roadmaking, and all such matters.

CALIFORNIA.

By E. J. WICKSON, *Berkeley.*

The number of institute meetings held in California during the past year was 110. At these meetings we employed 25 speakers, and the work for the year was carried on at a cost of \$8,934. Our work has been pretty much the same as in previous years, our chief aim being to reach each locality at its time of greatest leisure. This year we have particularly tried to call the attention of those in attendance at our meetings to the advantages to be derived from reading and from correspondence courses.

CONNECTICUT.

By J. G. SCHWINK, Jr., *Meriden.*

[For the Dairymen's Association.]

I beg to submit the following report for the year ending November 1, 1905, on behalf of the Connecticut Dairymen's Association, an organization created to advance the dairy and related interests of the State.

We have held during the year 21 meetings, as follows: Annual meeting of five sessions; 13 institutes, 9 of which were in two sessions and 4 of one session; 7 field meetings, with mornings devoted to inspection of crops and herds and afternoons to lecture in same.

The amount of money spent for institute work was \$800. We have employed 74 speakers.

Our general plan of campaign is to cooperate with members of the association who are also members of granges, farmers' clubs, etc. The local grange or club furnishes the hall and refreshments for institute force and the association the programme and speakers. Much good has resulted from these meetings and a vast improvement has taken place throughout the State in the methods and systems of caring for our flocks and herds.

New lines of work to be inaugurated are the pushing out into sections where there are no granges or farmers' clubs and further develop the dairy interests of the State.

The average attendance at each meeting was 150; total attendance, 3,300.

By H. C. C. MILES, *Milford.*

[For the Pomological Society.]

For the year ending November 1, 1905, there were held 9 institutes, 1 State fruit growers' meeting, and 2 summer field days. The total average attendance at all these meetings was 2,275 persons.

The total cost of the institutes was \$185 and of the other meetings \$365. In addition the distribution of reports and other printed matter will bring the total cost of our work up to nearly \$1,000. Fifteen speakers are on our institute force.

In our State there is no concerted plan of conducting institute work. The Pomological Society, the Dairymen's Association, and the Board of Agriculture each hold institutes and carry on the work as one feature of their work; therefore the combined reports of these organizations show actually what Connecticut has done in the line of institute work.

So far the institutes have been held upon the request of local granges and farmers' clubs, and the local arrangements are made by these granges and clubs, the advertising, selection of speakers, and conduct of the institute being carried out by the State organization. The only expense asked of the local people is the expense of the hall, all other expenses being met by the State society. Interest in institute work is on the increase in our State, and the demand for institutes is larger each year than we can supply with the funds at command.

For the coming year the legislature has given an extra \$500 to the Pomological Society for the purpose of carrying on institute work, and with the work now well planned in advance, we anticipate more and better work will be accomplished in the line of carrying the benefits of the institute to the farmers and farmers' families in our State.

DELAWARE.

By WESLEY WEBB, *Dover*.

The farmers' institute movement in Delaware is gaining steadily in influence and popularity. Improved methods in farming and a more enlightened sentiment upon public questions are among the results of this movement. During the year 25 meetings were held at a cost of \$700. Fifteen speakers were employed. The total attendance was approximately 6,000. Several meetings were held in each of the three counties, so that the institute was brought within reach of nearly every farmer in the State, yet, probably not more than one-fourth of them attended any of the meetings. Certain conditions made it advisable to hold meetings of one day each, although our experience shows that meetings of two days each bring out a larger attendance and develop a more intense interest. The topics discussed were chiefly those relating to the various lines of farming, one session being usually devoted to educational matters, and a few meetings were devoted to such special subjects as good roads and civic righteousness. An agricultural conference is held once in two years for the discussion of the broadest public policies.

GEORGIA.

By HARVIE JORDAN, *Atlanta*.

At the end of the fiscal year of 1905 a total of 50 institutes had been held in Georgia, and \$3,500 was spent in carrying on the work. Twenty lecturers were employed, and more than 25,000 farmers reached in the aggregate attendance on the various institutes held. The sessions each covered a period of two days, one-half of each day being devoted to a women's session in which lady lecturers are employed to deliver talks on domestic economy, and on building up the country home and promoting social features in rural life. These sessions are largely attended by farmers' wives and daughters. We had an average attendance of about 500 people at each institute. Every phase of farm work was covered by competent lecturers; the question box was well patronized and everything done to advance and promote the cause of agriculture.

IDAHO.

By H. T. FRENCH, *Moscow*.

The number of institutes held in the State of Idaho last year was twenty. This number varies from year to year. We are given \$2,000 every two years for institute work. Last year we held only 20 meetings. This year we will hold 30 meetings in the State.

The amount of money we have would not be ample to carry on this number of institutes were it not for the fact that the railroads give free transportation to institute workers. This is a very important aid, because many times our workers have to travel from 500 to 1,000 miles to the institutes. In one instance we have to travel 1,050 miles before we reach the farmers' institute localities. Including the travel from place to place after reaching that section of the State, and also the return trip, we have traveled 2,500 or 3,000 miles before we get back home, after holding a series of meetings in the extreme southeastern part of the State.

The number of speakers employed is from four to six. The general plan of campaign does not follow the plan in many States; that is, we have no law governing the work of the institutes in our State. We are simply given an appropriation, which is put under the direction of the board of regents. They place that in the hands of the director of the institutes, who is also at the experiment station; and it has been my privilege to take charge of it for the last seven years, and I simply use the money to the best advantage, and approve the bills, and let the results speak for themselves.

We have no county organizations, because it is absolutely impossible in the State of Idaho, where the counties are widely separated by high mountain chains or impassable mountains. We can not bring the counties together, and we have simply to go to the various sections and hold meetings, and everywhere we go we leave a local organization known as the farmers' institute, the object of which will be to perpetuate the meetings from year to year. These local organizations have grown into farmers' clubs and farmers' organizations of different kinds.

The lines of work during the past year have been numerous. We have introduced domestic economy. We have taken an instructor to various places in our State, and that plan is taking very well indeed. That is the only new line of work we have taken up in the past year.

ILLINOIS.

By B. F. WYMAN, *Sycamore.*

There were held in Illinois during the last institute year 101 county institute meetings of from two to four days' duration, with a total of 635 sessions. The total number reported in attendance at these institutes was 69,759, and at the State institute the attendance was estimated at 4,000 the first day, 4,500 the second day, and 5,000 the third day. The amount of money expended in the State in institute work was, approximately, \$19,757.90. Thirty-three speakers were employed from the college of agriculture and the experiment station, while 89 local speakers were listed and used to a greater or less extent throughout the State. There were in the State 37 expert corn judges, who gave instruction in growing, breeding, and judging corn, and gave material assistance in many institutes.

The process of evolving a perfect farmers' institute is one that will be long in its accomplishment. Human nature is composed of so many and varied characteristics that many methods have to be tested, only to discard the greater number. Illinois during the past eighteen or twenty years has been passing through the process. Her farmers' institute is constantly adopting new methods and as persistently passing others. With our years of experience and tests we have great confidence that we are making important progress. We are putting the institute on a more substantial basis. We are unifying the work and getting in closer touch with the work in the counties, and the counties are depending more fully each year upon the State institute for speakers who can give ascertained facts upon the subjects under discussion. Experiences of successful farmers have been potent factors in the upbuilding of the Illinois institute, but the experiences differ so greatly, owing to different conditions under which they are gained, that nearly all the counties now demand the results of the more technical work that is being done by the college of agriculture and the experiment station. The demand for institute speakers from the station is so great that it is impossible to supply it, and we have to furnish the county institutes with specialists in the different branches of farm culture, in order that the most pertinent questions may be ably discussed. Illinois extends so far from north to south that it has a great variety of productions—wheat, apples, pears, peaches, small fruits, and vegetables in the southern part; corn, broom corn, and stock in the central; corn, oats, stock, and dairying in the northern, while domestic science, education, forestry, soils, and a multitude of other subjects are demanding attention throughout the State. To supply all these demands taxes severely the ability of the State institute. Such demands show us clearly that we are on the right track and inspire us with such confidence that we shall make the greatest efforts to supply all demands; that we shall soon be able to do so we have no doubt.

This year we have organized a boys' corn contest in corn judging, the successful contestants being awarded a two-weeks' course (short course) in agriculture at the college of agriculture, University of Illinois, in January next, all their expenses being paid. It is with pleasure that we report that many counties are moving in the matter and that some counties will send as many as eight or ten boys. We hold to the theory that if we can get the boys interested enough to want to go to the college of agriculture, we have accomplished much.

Another important move we are making is the combining of the school-teachers and farmers' institutes. We expect by doing this to accomplish much in interesting and instructing the school-teachers in agriculture. We are also working with a view to establishing a correspondence school of agriculture under the direction of the college of agriculture.

We hope to accomplish much through these new features, but it will take time to determine.

INDIANA.

By W. C. LATTA, *Lafayette.*

During the past year, 1904-5, 226 winter and 31 summer institutes were held. Of the winter meetings 109 were one-day and 117 two-day institutes. The summer institutes were all one-day meetings of two sessions each. In all, 897 sessions were held, and the aggregate attendance was, approximately, 80,000, reckoned according

to the method of computing attendance approved by the American Association of Farmers' Institute Workers.

The State expenditure for the institute work was \$10,000. It is assumed that the several localities where meetings were held added about \$2,000 to the above-named sum. Of State funds \$25 was apportioned to each county to help in meeting the local expenses incurred in holding the institutes scheduled by the State superintendent. The balance of the apportionment was used in paying the per diem and traveling expenses of speakers holding an annual conference and in meeting the expenses of the general office.

The number of assigned speakers was 47. It is presumed that at least as many local workers assisted in rendering the programme at the several meetings.

There is no uniform rule as to the proportion of assigned and local speakers, although the State superintendent recommends that about half the time be given to local speakers. In some places local speakers are not assigned any place on the programme, but join informally in discussing the subjects presented by assigned speakers.

Practically every county now has an organization county-wide in extent. Early in the spring this organization, through its officers, who represent the several townships, suggests to the State superintendent, upon his request, dates and places for meetings and subjects for assigned speakers for the ensuing year. With this information the State superintendent arranges the schedule of meetings and publishes the same about two months prior to the opening of the institute season in November.

The State superintendent assigns two speakers to each two-day meeting and one speaker to each one-day winter meeting. Extra speakers are sometimes assigned to discuss special subjects.

The several institutes scheduled are prepared for and conducted by the county chairmen in their respective counties.

In addition to serving as lecturers, the speakers are authorized to assist and advise the county chairmen in such other ways as may be deemed necessary for the good of the work.

An official report of each institute, giving attendance, method of advertising the meeting, and other information, is made to the State superintendent by the secretary and by each speaker.

Each autumn, about six weeks before the opening of the institute season, an annual conference is held for the purpose of preparing county chairmen and speakers for the meetings to follow.

The only strictly new line of work taken up the past year was the holding of summer institutes especially for farmers' wives and children. As before stated, 31 meetings were held in June and July. A domestic-science instructor, by request, attended all of these meetings. Over half the meetings were attended, upon request, by a practical poultryman. These meetings ranged in attendance from less than 25 to 200 or more. The summer audiences were made up largely of women, but there was a liberal sprinkling of children and a small proportion of men at most of the meetings. This work has proved popular, and will be continued if funds will permit.

KENTUCKY.

By HUBERT VREELAND, *Frankfort.*

Institute work being practically an innovation in Kentucky, we have proceeded in a different manner from that employed by many of the States that have been holding institutes for many years. The farmers of the State were ignorant as to the nature of institute work, and it was realized that to attempt to hold a large number of meetings throughout the State with two or three lecturers would prove a failure until the farmers had come into sympathy with the movement. The commissioner of agriculture, who is the director of farmers' institutes in this State, decided to hold a number of large county institutes in various sections of the State, in order to arouse the interest of the farmers and acquaint them with the nature of the work. As high as seven lecturers were employed for one institute, and they were of such a nature as to attract the attention of all of the surrounding counties. The result is that such an interest has been created throughout the State that all of the counties are now clamoring for institutes. Beginning the 1st of January the forces will be divided, and an effort will be made to hold an institute in every county in the State each year.

Last year the department conducted only 24 institutes, but these were all conducted on a large scale and were usually held at the county seats. A number of small institutes were held at different precincts in the various counties. In addition to this the commissioner conducted an alfalfa and corn special over the State, and lectures were delivered at 73 points along the route. From one to three lectures were delivered at

each point. More than 10,000 farmers were addressed in this way. The department of agriculture has also organized 45 farmers' clubs in the State, which clubs will make the local arrangements for institutes in the future. The institutes held last year averaged \$70, but this will be considerably reduced next year. The department has spent during the past year \$4,180 in the holding of farmers' institutes, organizing farmers' clubs, and conducting the alfalfa and corn special. Twenty speakers have been employed at various times.

The department has made it a rule to require the various counties to form a permanent organization before a county institute is held, as it has been found that with a good working body of farmers it is much easier to arouse the interest and hold a successful institute. When these clubs make application for an institute, they are directed to arrange the local part of the programme and to submit same to the commissioner, who adds the lecturers from a distance and returns the programme to the club completed. The clubs are also directed to send in a list of the subjects that are of paramount importance in their particular community, and the lecturers are secured accordingly. The proceedings of all institutes are published, and 10,000 copies are disseminated among the farmers.

The only new line of work carried out was the conducting of the alfalfa and corn special, which has done more to arouse the interest of the farmers and to inspire them to grow better crops than anything that has ever been accomplished along agricultural lines in Kentucky. Prof. P. G. Holden, of Iowa, was the principal lecturer on corn growing, and Joseph E. Wing, of Ohio, was the principal lecturer on alfalfa. The trip of the special consumed nine days, and the train was welcomed everywhere by the farmers. Twenty thousand booklets on alfalfa and corn growing were distributed along the route.

The department will organize the local clubs into a State farmers' institute within the next few months.

LOUISIANA.

By J. G. LEE, *Baton Rouge.*

I have the honor to submit the following report of institute work done in my State for the year ending, which, owing to the outbreak of fever, was severely handicapped and materially curtailed on account of the quarantine restrictions that occurred when our well-organized corps of institute workers had begun the regular summer work. Owing to the prevailing conditions, these corps were called in, and the continuation of the quarantine restrictions prevented any resumption of the work. Therefore we can only present a partial report and tell of what might have been done. In the beginning of the year, during the months of January, February, and March, we placed a competent corps of expert lecturers in the field who conducted a series of fruit and truck institutes, twenty-two in number, which resulted in increasing the fruit and truck industry and greater diversification of crops. At these institutes our lecturers explained the methods of planting and cultivating fruit and truck, grafting, fertilizing, selecting, cutting, and packing for the market; also the disposing of their products to the best advantage. I may here say that these institutes encouraged increase in the fruit and truck business, which is attracting the attention of our small farmers in several parts of the State who had formerly farmed on the one-crop plan. It is likely, with the great advantages of many parts of our State where rapid railroad transportation exists, the fruit and truck industry will become an important factor in the revenue of the State. Our institutes, notwithstanding the inclement weather which sometimes prevails in the aforesaid months, were well attended, and many intelligent and progressive farmers took part in the discussions and seemed anxious to learn more of these important subjects pertaining to their welfare.

There was also held at the beginning of the year, in cooperation with the commissioner, the annual convention of the Louisiana Agricultural Society and Stock Breeders' Association, at which stock raising and economic agricultural subjects were presented and discussed in an able manner by experienced and practical lecturers and successful laymen. Then, again, the fertilizer convention and State horticultural society was held, in which the institute lecturers took part and discussed matters pertaining to field, farm, and orchard. Lectures were given in ten summer normal schools for public school teachers.

Summer institute work, as previously mentioned, was organized into three strong corps, which were to have covered all parts of the State, but owing to the conditions as explained this work had to be abandoned. Twenty speakers and two lady lecturers in domestic science were secured for this work, and with the satisfactory results from the previous year everything augmented a much more successful institute work. The importance of more and better fairs was also taken up at the time of the

fruit and truck lectures, and resulted in the organization of a number of additional fair associations for the purpose of holding more and better fairs, but only three were held, owing to the prevailing quarantine restrictions. There is an awakening interest and growing demand for fairs, which the department is fostering and encouraging with the desire to have parish and district fairs throughout the State, and eventually a State fair.

The legislature appropriates \$2,000 per annum for institute work, but this amount is totally inadequate, and but for the cooperation of the Louisiana State University and Agricultural and Mechanical College and the experiment stations (which supply us with the greater part of our lecturing force), the joint assistance of the railroads, and the farmers' organizations the results would be very unsatisfactory. As it is we have been able to keep pace with the constant and growing demand for institutes, and have every reason to believe that much good is derived by the farmers from the work.

MARYLAND.

By W. L. AMOSS, *Benson.*

Not having reported at our last meeting in an orderly manner I will endeavor to cover the two seasons with this report.

There has been no lagging of interest on the part of patrons in our work; on the contrary it is a pleasure to report a healthy growth and evident appreciation of benefits derived by attending the institutes. By request, from year to year, the names of the working and progressive farmers of the State are being added to the mailing lists. We believe in growth in numbers of our audience. There is a limit beyond which there will be no increase, but in value to him seeking knowledge the work has no bounds. It has been and it is our constant effort to establish a feeling of confidence between the worker in the laboratory and the worker in the field, to their mutual benefit. No time nor expense has been spared to study new theories and new facts before permitting them to be disseminated among our husbandmen.

Preparatory to proclaiming that the efforts of the National and State department are working a revolution in crop production, a delegation composed of selected men from counties on the Eastern Shore and southern Maryland were invited to visit farms in Pennsylvania and New Jersey, where probably the best demonstration could be seen of progressive agriculture and dairying in particular. These representatives read reports at the institutes in their respective counties during the season following, while during the season of 1904-5 these advanced farmers who were visited came to our State to tell how by ceaseless energy and constant study of bulletins issued by experiment stations they had succeeded. This method of preparing local men to do institute work has been conducted with the best results. It sets aside prejudice, for seeing is believing. It inspires confidence, for it leaves no doubt in the mind of anyone that the department is in earnest and will not promulgate what has not been tried.

The new and important task assigned the director to collect and install an agricultural exhibit for the Maryland commissioners to the Louisiana Purchase Exposition at St. Louis kept him actively engaged until December 15, 1904, when the work of organizing the institute season of 1904-5 was taken up and prosecuted in accord with the bill creating the department, with few if any variations from the past. We are required to give one institute in each county. Following the institute season, or the middle of March, some novel institute work was taken up at the suggestion of Director Patterson, of our experiment station, supported by our governor and an interested citizen. Trains of cars were placed at our disposal on the Maryland and Pennsylvania and Western Maryland roads for the purpose of taking to the farmers information on selecting and testing seed corn, after the manner previously advised at the special corn institutes attended by Prof. A. D. Shamel, season of 1903. This work was a pronounced success, and suggests a better method of meeting farmers for some branches of work than any tried before.

It is a pleasure to report that domestic-science work, brought to the attention of patrons and school superintendents by this department, through the energy of Miss Emma S. Jacobs, superintendent of cooking schools of the District of Columbia, has been adopted by the school board of Baltimore County. A teacher has been employed and twelve schools are being instructed, one among the colored people.

During the season of 1897-98 this department endeavored to introduce nature study in the public schools, through the work of Mr. George P. Powell, Prof. S. B. Heiges, and others. In connection with this work it has turned its attention to the teaching of agriculture in the public schools. At the request of Superintendent Simpson, of Carroll County, Prot. Charles T. Goodrich, author of *First Book on Farming*, has been

engaged by our department to visit such schools, assigned by the county school board, within a day's walk of the county town. This work is progressing very satisfactorily and preparations are being made to start a garden adjoining each school during the spring term. Some assistance has been rendered independent institutes for the colored people by personally attending, accompanied by others. The attendance and interest have been gratifying, and we are impressed with the belief that our department should do more to help these people to become better farmers and farm laborers.

It is a pleasure to acknowledge in this report the help and support freely and gratuitously given to our department by members of the staff of both college and station. Such help has been an important factor in the success we are assured has attended our efforts to help our farmers and aid in the agricultural development of the State.

Under the class of new work I will mention that just closed, which was conducted by our department cooperating with the experiment station in its exhibition work at county fairs. An equipment was purchased, consisting of a tent with dark lining, a moving-picture camera, a stereopticon with moving-picture attachment, with which the work of exhibiting products and methods of producing them, with educational variations, was done at eight fairs with varied success. But much experience, we believe, will enable us to report something of interest next season.

The number of meetings held during the season of 1904-5 was 23, not counting special corn work nor fair work. Amount of money spent was \$4,000; number of speakers employed, 20.

MASSACHUSETTS.

By J. L. ELLSWORTH, *Boston.*

The institute work of Massachusetts for the year 1904, which is the last for which figures are available, was remarkably successful. One hundred and fourteen meetings were held, with a total attendance of 12,426, or an average of 109 at a meeting, the largest total and average attendance since these figures have been kept. The total expense of these meetings was \$1,454.64, an average of \$12.76 per meeting. We are able to keep the expense down to a low figure, as the agricultural societies stand all the expense for halls, advertising, heat, lights, etc., the only charge to the State being that for the speaker and his expenses. We pay our speakers \$10 per meeting and expenses, and owing to the short distances traveled in our little State, the fourth smallest in the United States in area, we are able to keep the expenses at a minimum. Probably the average expense for these meetings, where expenses were paid, is considerably in excess of that indicated by the figures given; but as there are a number of meetings, properly included as institutes, which cost the State nothing for speakers, we are enabled to keep the average down.

Our appropriation for institute work comes under the head of "Dissemination of useful information in agriculture," and amounts to \$3,000 for this year. Only about half this sum can be spent in the institute work proper, as we must pay from this source the expenses of printing crop reports, bulletins, nature leaflets, extracts from the annual reports of the board, and also the expenses of our demonstration work, though this is perhaps practically in line with the institute work.

During the year now closing, the institute work has been very successful, and though I am not yet in a position to quote figures in regard to it, I feel sure that all records have been broken, both in number of meetings and total and average attendance. We are constantly endeavoring to improve the list of speakers which we employ, to cut out the dead wood, and to secure good live men on the various subjects of interest to our farmers, and we feel that we have been successful in this, as evidenced by the increased interest manifested in the meetings from year to year.

During the winter of 1905 we employed the following speakers, J. W. Sanborn, of New Hampshire; J. L. Hills, of Vermont; C. S. Phelps, of Connecticut, and John Craig, of Ithaca, N. Y., on circuits of institutes, securing an option on their services for a week each, and arranging a greater or less number of institutes for each of them in accordance with the calls received from the agricultural societies. This modification of the system in vogue in many of the other States worked very well with us, and a number of interesting and valuable meetings were held under this plan, at a less total cost than would have been the case had these gentlemen come on from their respective States for each meeting.

As the societies have to bear a large share of the expense of these meetings with us we do not feel that we can take all the arrangements out of their hands, but allow them to select their speakers from a list prepared and published by the board, also dates and places of meetings. This works very well with us, as it stimulates the

local interest and makes the people feel that it is their meeting to a greater extent than would be the case if the arrangements rested entirely in the hands of a central bureau. Another factor is that Massachusetts agriculture is so varied that it is difficult to say what is the prevailing subject of interest in any community, and if left to themselves to select subjects they can usually arrive at a better solution, whereby the greatest good to the greatest number may be served, than would be possible if the matter were taken from their hands.

One feature of the institute work, or perhaps it would be better to say of the public meeting work of the board, which has been amplified during the year, is the public demonstration work. A demonstration meeting, called a summer field meeting of the board, was held at Lowell, at which we had demonstrations of spraying machines, of the preparation of Bordeaux mixture, of fruit packages, of the killing and dressing of fowls for the Boston market, of the dairy and beef types of animals (from typical specimens before lecturer and audience), and of the Babcock milk test and the latest methods of sanitary handling of milk. This meeting was attended by about 500 people and seemed to be a great success in every way. Work of this sort was also done at the New England fair at Worcester, under the direction of the board, the two demonstrations merely differing in some features and not in plan or scope. Here also the demonstrations were enthusiastically received. Another year it is the intention that this line of work shall be much amplified and improved.

Our fiscal year in Massachusetts has always ended on December 31. As a consequence our appropriations are made for the calendar year and the work in different lines goes on right up to the close of December, so that it is usually sometime later before accurate figures can be compiled. Next year there will be a change, appropriations being made to November 30, instead of December 31. Therefore if I am able to meet with you again, as I hope to do, and if not, in my report, which I shall send, it will be possible to quote figures for the current year.

MICHIGAN.

By L. R. TAFT, *Agricultural College.*

The results secured in the past season's institute work have been very gratifying, both in the interest shown by the county institute officers and the farmers as a whole and by the attendance at the different institute meetings. In spite of the fact that the weather during the weeks when most of the institutes were held was so stormy that it was very difficult for either the farmers or the lecturers to reach the meetings, the attendance was several thousand greater than the previous year.

The appropriation for a number of years has been \$7,500, from which everything except the local expenses of the institutes must be paid. In addition to meeting all bills for salaries and office expenses and paying the per diem and traveling expenses of the lecturers, 9,000 copies of the annual institute report, containing about 200 pages, have been printed and distributed, and a round-up institute, lasting four days, in connection with which conferences of lecturers and county institute officers were held, was carried on at an expense of about \$700, for speakers, expenses of lecturers and delegates, printing, and postage.

During the year 70 county institutes, for which three or four speakers were furnished, were held. These consisted of an average of five sessions, in addition to a women's congress of one session. There were also 200 one-day institutes, with two or three sessions, for which one State lecturer was furnished.

The total attendance was 92,000, as determined by taking the sum of the attendance at all of the sessions, as determined by actual count, or about 55,000, using the method adopted by the association.

The number of institutes that we could hold is measured by the appropriation, as, although absolutely nothing has been done to secure them, applications are now on file for nearly 100 more than our funds will permit to hold.

Thirty-five paid lecturers have been used during the year, in addition to forty who have done more or less work without remuneration. In the latter list are members of the faculty of the agricultural college and the experiment station staff, and from the State university and normal schools, and various State commissions, and State department of public instruction.

After consulting with the officers of the county institute societies, who meet for the purpose of selecting the places and dates for the institutes and the topics that they wish discussed, the counties are grouped so as to reduce to a minimum the expense for traveling, and after selecting the speakers who can handle the topics desired, a skeleton programme is furnished the county secretary, who looks after the

local arrangements. Each speaker is furnished with an itinerary and orders for railroad tickets at half rates.

In addition to the usual topics relating to the science and practice of agriculture, special attention has been paid to the subjects of "schools," "forestry," "good roads," and the teaching of agriculture in the public schools. The placing of the facts regarding these matters before the farmers of the State has brought about legislation permitting the centralization of schools, the creation of a forestry commission, with a State forester and forest wardens, together with a forest reserve, the teaching of the elements of agriculture in the State normal school and the county normal schools, and an amendment to the State constitution permitting the appointment of a State highway commission, and a system of State rewards for the building of roads. In the way of new work, plans have been made for the holding of a State normal farmers' institute, and a series of railroad institutes that will reach some fifteen counties. Something has also been done in the way of field and orchard institutes, with demonstration lectures in pruning and spraying.

MINNESOTA.

By O. C. GREGG, *Lynd.*

During the year we held 105 institutes, all being of one day only, with a total number of sessions of 227. The total attendance was 52,125, estimated according to the plan suggested by the American Association of Farmers' Institute Workers.

The appropriation for the year was \$18,000, which amount covered the entire expense of the institutes and the cost of publishing 35,000 copies of our Annual No. 17. We employed 14 speakers during the year, some for long and some for short periods. Very few local speakers were used. Our general plan of work has been the same as heretofore, with the exception that we have held one-day meetings entirely. This has been done in order to meet, as far as possible, the many calls which we have received for institutes. We have given some special work to help the women's institutes organized two years ago. We have had two special workers visit these institutes during the year, gathering such information as will help us in furthering the work of that department.

MISSISSIPPI.

By J. C. HARDY, *Agricultural College.*

The number of meetings mapped out for the past year was 200, but on account of quarantine not more than 100 institutes were held. Twenty-four speakers were employed, and the work for the year was carried on at a cost of \$3,000. The general plan of campaign was much the same as in previous years. The principal new lines of work have been to have the second day for a practical day, in which to do some practical work, such as building roads, making terraces, judging cattle, etc.

MISSOURI.

By G. B. ELLIS, *Columbia.*

The principal institute months in this State are September, October, November, and December. On account of the great interest in the World's Fair which was held in St. Louis in 1904, the amount of institute work done in the State was considerably curtailed. There were held 58 one-day meetings, 44 two-day meetings, and 2 three-day meetings; the total number of sessions 256, with a total attendance of 2,560, an average of 100 per session. The amount of money appropriated for the year was \$5,000, but on account of the curtailment of the work, as above stated, only \$3,100 of this appropriation was used. On account of a technical ruling of the State auditor the balance of the fund reverted to the State. It had been expected to use this balance during the winter months, but on account of this ruling it could not be done. There were 30 speakers employed during the year. About half of them were from the agricultural college and experiment station. Three speakers were employed from other States. No material change has been made in the general plan for the work in this State. The traveling institute which was inaugurated two or three years ago has been continued with success. The plan of having the institute lecturers visit the schools in towns where meetings are held and deliver lectures has been extended, and we think by this method we are reaching hundreds of young people of the State. In a number of places where high schools are in session the classes are dismissed for one session of the institute, which is attended by the students in a body. Lectures especially prepared for the pupils are given.

MONTANA.

By F. B. LINFIELD, *Bozeman.*

The total number of meetings held during the year was 47, the number of sessions being 100, and our total attendance was about 7,000. The speakers employed on the trips for the year numbered 20, and the work was carried on at a cost of \$4,000. This work is new to the State, having been started on a systematic plan only about four years ago. The interest, however, is increasing very materially. Our big difficulty is to get a sufficient number of experienced workers that we can depend upon to help us in this work. Our plan of arrangement is to work through local farmers' institutes or agricultural organizations where these exist, and where they do not to delegate some person as special representative of the board to look after the advertising locally. No particularly new features have been introduced into the work during the past year, except that the number and places of meeting are increasing considerably. During the earlier part of this month we planned and carried out with considerable success a normal institute course at the agricultural college, which I believe in the future development of our work promises to be of very great help.

NEBRASKA.

By E. A. BURNETT, *Lincoln.*

The year ending June 30, 1905, was perhaps the most successful, from the standpoint of attendance and general interest, of any farmers' institute year yet held. The institute work in Nebraska never begins very early, the middle or latter part of November being about as early as our farmers can find leisure to attend such meetings. Most institute points prefer dates from the first of January to the middle of March. Our institutes began last year on November 18 and closed March 30 of the present year.

One hundred and fifty institutes were held. Of these 88 were one-day institutes and 56 were two-day institutes. Six institutes were held for three or more days. Four hundred and eighty sessions were held. The total attendance, according to the Government methods of calculation, was 67,241. Institutes were held in 68 counties.

Something over \$6,000 was expended in this work. The first year of this biennium running below \$6,000 left a larger amount for the second year. A slight deficit was also created by the scheduling of more institutes than could be held with the funds available. The university paid this deficit.

Farmers' institutes profit materially on account of their relation to the university. One thousand five hundred dollars was paid for salaries of the superintendent and assistant superintendent. Eighteen speakers belonging to the university staff attended 60 institutes, spending eighty-two days therein, receiving expenses only for this work. Twenty other State lecturers were employed, being paid a per diem and expenses. About 75 per cent of the institute work is done by these lecturers, who have no other relation to the university. This percentage is only approximate.

There were no women's institutes during the period covered by this report, but at three or four points the women took charge of certain sessions of the institute, furnishing the programme and being responsible for the same.

We endeavor to form permanent organizations at each institute point. These are not necessarily county organizations, some large counties having as many as three institutes and as many organizations. The permanent organization elects a president, a secretary and treasurer, and a local committee to look after the expenses and the programme.

Last year, at many institutes, corn shows were held in connection with the institute, the corn on exhibition being judged by the speaker on that subject.

Institutes are advertised through the State agricultural papers, by the printing of posters and by mailing postal cards from the central office to a list of farmers supplied by the local committee. Programmes are made by the assistant superintendent, and dates are published at least six weeks before holding the institute.

Among the special subjects treated last year were the selection and improvement of corn, the production of forage, tillage and rotation of crops, potato culture, the improvement of live stock and the feeding of cattle, care and management of swine, care and management of poultry, home adornment, scientific methods in the preparation of food, etc. At twelve institutes the question of improvement of earth roads was discussed, the "King" method of dragging the country roads being advocated.

Aside from the work done in the farmers' institutes, the university furnished the leading speakers for the various pure-seed special trains which traversed the State, advocating advanced methods in agriculture. The number of persons who attended the various seed-corn specials in the State was 41,886.

It is probable that the number of people reached by farmers' institutes during the present year will not equal that of the past year, although the demand for such work will undoubtedly increase. It is necessary to keep the expenses of institute work within the appropriation, and this can only be done by limiting the number to a point below those held during the past year.

NEVADA.

By P. B. KENNEDY, *Reno*.

The past year, our third year, has been one of especial activity along the line of farmers' institute work in Nevada. Nine different sections of the State were visited, including Gardnerville and Mason valleys in the west, Paradise Valley in the central portion, and Star, South Fork, Lemoille, Mound, Ruby, and Clover valleys in the east. Twenty-two meetings were held, with an average attendance of about 40 persons and a total of about 800.

A departure was made from the regular method of conducting the institutes from that of previous years in that all the meetings were held in the country districts themselves, and not in the adjacent towns. The advantages gained were several. The ranchers felt more at home while discussing the various subjects, as no restraint was put upon them by the presence of lawyers and town orators. The attendance consisted largely of ranchers and their families, so that we were talking to audiences that we were interested in and who were interested in us. The spare time in the morning, when not taken up in travel, was used in going over the farms and becoming personally acquainted with the farmers' problems.

A great difference was experienced in the manner in which some audiences would receive us. In some cases we were cordially received and encouraged to come again; in other cases we received few words of thanks or encouragement.

The distance traveled to conduct these institutes was about 1,000 miles by rail and 400 miles by team and wagon. A driver and three institute workers proved to be a very convenient number to transport, as behind the two seats there was a place for the stereopticon in a trunk, which always accompanied us.

The main subjects talked about at the meetings this year were as follows: Types of beef and dairy animals, breeding horses, duty of water, plants poisonous to stock, range problems, weeds, insect pests, anthrax and blackleg, gophers and ground squirrels, alkali soils, teaching the subject of agriculture in the public schools, and the agricultural college. At nearly every institute lectures are given, with practical demonstrations by our principal of the domestic science department.

The cost of the institutes to the station has been about \$150. This large amount of work could not be accomplished at so small an expense but for the assistance of the Southern Pacific Railway Company and the exceeding hospitality of the ranchers themselves, who opened their houses and gave us a hearty welcome, whether they thought we could benefit them or not.

NEW BRUNSWICK.

By T. A. PETERS, *Fredericton*.

For some years up to 1901, meetings had been held for the discussion of agricultural subjects under the direct supervision of the department of agriculture. In 1901 an act was passed providing for the formation of a farmers' institute system. This act provides, among other things, that where agricultural societies now existing, or hereafter incorporated under the agricultural act of 1888 or amendments thereto, will undertake to hold meetings under regulations made by the lieutenant-governor in council, under section 3 of this act, they shall, by their districts, be considered as farmers' institutes. Fifty-nine institutes were established under this act and, in addition, 7 institutes were established in outside districts. During the year 1904, 139 meetings were held, with a total attendance of 5,324, number of addresses delivered being 309. In 1905, 150 meetings have been held, with a total attendance of over 6,000. The subjects treated of include the breeding and feeding of all kinds of stock, including poultry, cultivation of the soil, clover growing, soil moisture, demonstration in judging live stock, spraying, pruning, and culture of orchards, etc. The government appropriation for farmers' institute work is \$2,500 per annum. No portion of this amount is used for superintendent's salary, as that work is done by the deputy commissioner for agriculture.

NEW JERSEY.

By FRANKLIN DYE, *Trenton.*

At no time since the beginning of farmers' institutes in New Jersey has the interest in their purpose and work been so marked as it was during the season of 1904. This interest was manifested in the increased attendance, which was so general that it was the rule, there being but two or three exceptions to it and those for cause.

This increased attendance was not out of idle curiosity nor for social intercourse, but for the helpful, practical benefits the institute provides through its speakers. The interest in the addresses was close, and the questions asked showed a growing intelligence on the part of the questioners.

Another evidence of growing interest is, requests are coming in for more meetings. These signs of progress so encouraged those in charge of this work in New Jersey that a modest appeal was made to the legislature at its last session for an increase of the State appropriation for this object, and it is gratifying to state that, having a governor and a legislature in full accord with our work, the addition was granted.

Accordingly we are planning, in fact have already arranged, for an extension of our work, which will cover most of the time from November 20, 1905, to latter part of February, 1906.

The number of meetings held last year was 30. This does not include the annual meeting of the State board of agriculture nor that of the State horticultural society. The institutes proper covered 36 days and 102 sessions, or, including the two State meetings named, 41 days and 115 sessions.

The amount of money expended, exclusive of printing, postal cards, posters, and programmes, was \$1,800, which would be \$51 per day average for each institute day. The State prints the required advertising matter, all printing being put out by the State to the lowest responsible bidder; but the cost of such printing is taken from our appropriation. The printing, with the postage, would probably add to the expense of each institute about \$3.

Speakers employed were three from other States during the season, three professors from our own State agricultural college, and five or six local speakers, who were farmers, on special subjects connected with their own special line of work, as the production of early tomatoes, production of melons, asparagus, peppers, sweet potatoes, etc. Besides being a dairy and fruit State, New Jersey is preeminently a market garden State, and a variety of subjects must be treated in our institute lectures, subjects adapted to the locality in which the meeting is held, or else the institute would fail in its purpose.

Our plan of work is simple. The first notice sent out contains a list of all the meetings to be held, the place, and the date. This notice goes to the newspapers and the various farmers' organizations. The next notice is the programme of the meetings, containing place of meeting, hall, list of subjects and speakers, a few paragraphs on the purpose of the institute, and a short statement of who the speakers are. These programmes are sent to the press in the neighborhood where each institute is to be held, also to the local committee, if such there be, to distribute among the farmers.

The third advertisement of a meeting is by large posters. These are sent to the local committee about eight or ten days before the date of the meeting, to be put up in various public places. We are of the opinion that plenty of judicious advertising secures a larger attendance than is likely to prevail where but little notice of the meeting has been given.

New lines of work have to do with old questions, interest in which, for local reasons, has subsided. For example, the peach industry, once so prominent in the State, but now on the wane, will be taken up in the coming institutes with a view to creating a new interest in a product which we believe needs only to be understandingly treated to be made profitable. So, also, the production of alfalfa in all our dairy sections especially will be discussed, and so presented as to encourage our dairy farmers to produce a generous supply of this valuable plant, which, in conjunction with corn, should make the dairyman growing both comparatively independent of other sources of food supply.

The study of soils will also be continued as to their variety, composition, requirements, etc., and this by a soil specialist from our State experiment station.

New lines of work are also embraced in our efforts to have the old, fundamental principles that underlie safe and profitable agricultural practice presented in a clear, common-sense, logical way, so that the average agricultural mind, occupied as it is with home cares and daily toil, can apprehend and comprehend what is stated and become so interested as to apply the teachings in practice.

Another line of teaching, quite as important as the one named, is to disabuse the mind of error. Errors in agricultural practice have grown not only out of misconceptions of natural and therefore scientific truth, but also out of and by reason of erroneous teachings, whether from the platform or the bulletin. Error must be cleared away before the truth can become established.

NEW YORK.

By F. E. DAWLEY, *Fayetteville*.

The winter of 1904-5 was without exception the most successful season of institute work that New York State has ever experienced. The season opened with a normal institute lasting six days, and held in two sections. The first section of three days was held at the State experiment station, Geneva, and the second section of three days at Cornell University, Ithaca. The speakers at the normal institute have now learned about what material the institute lecturers are most in need of, and have been able to so arrange their lectures that the normal institute is doing far more good than formerly. The value of these normal meetings is very clearly seen, and the quality of the work has been greatly improved since they were inaugurated.

The day following the close of the normal institute at Ithaca the workers began their regular institute season, and were in the very best condition for a strong winter's campaign. The first meeting was held on November 21 and the season closed on March 17, 261 meetings having been held. Of these, 129 were one-day institutes, 128 two-day meetings, and 4 lasted three days or more, with a total attendance of 87,439.

In addition to these a number of independent institutes were held, the total attendance at which was 31,000, giving an attendance of 118,439. This is a very great increase over the attendance of the winter before, but when taken in connection with a period of years it simply shows our normal average increase for each year. The winter of 1903-4 was the most inclement that New York State has experienced in years, and at many of the meetings the roads were impassable, so that the attendance that year was much lower than the average.

During the year we held institutes in every county in the State except Richmond and Kings. One of the most successful meetings we hold is in New York City in connection with the American Institute. We cooperate very largely with the various organizations in the State, the director of institutes, who is a director in most of the agricultural associations and societies, assisting largely in arranging the programmes for their meetings. The attendance at these meetings is figured in with our institute attendance, as they are practically our round-up meetings, but the attendance at summer picnics where we furnish lecturers, which is very much larger than the average attendance at the winter institutes, is not figured in.

Our appropriation is the same that it has been for a number of years—\$20,000, but at the last session of the legislature a special appropriation was made to the education department of the State to enable it to pay the expenses of lecturers, which it furnishes to the farmers' institutes, as in the past.

Our belief in the advantages of the system of a central management, sending to each meeting from two to six speakers, who will take up the greater portion of the time, is strengthened each year, as the local people in New York State are far better pleased to have the work mapped out for them and carried out by State help than they are to make an entertainment of the meeting by the use of local help, recitations, and music. We discourage the idea of exhibits of implements and products at our meetings further than a rich and choice decoration of the halls. However, in a few instances something akin to a local fair is held, as much as \$300 or \$400 being distributed in prizes in certain sections. These matters, however, must be governed by local conditions to a very great extent.

Our special "boys and girls" sessions are very successful, and the number of young people in attendance, as well as the large number who are attending our State agricultural college, who attribute their first interest in agriculture to enthusiasm received at a farmers' institute, is an evidence of the efficiency of this line of work.

While we have not dropped the special subjects for discussion which have been on the programmes at each institute during the past few years, and are still talking good roads, better schools, and alfalfa, during the coming year we shall pay particular attention to a discussion of the newer treatment for milk fever, illustrated with the apparatus, the advantages of soil inoculation and alfalfa growing, and the advantages coming from spraying potatoes.

The period devoted to the question box is perhaps the distinguishing feature of New York State's institutes. The questions from each institute are sent to the central office, and an examination of them indicates the wide range of subjects discussed.

It is well known that the agriculture of New York is more varied than that of any other State, and that our people are engaged in more lines of special work than most others. Consequently it is almost impossible for us to follow the system of some other States of sending a given number of speakers out who are kept together from the beginning of the season to the close. To meet the conditions as they exist and have only live, up-to-date subjects discussed in each community, we find it necessary to vary the corps somewhat, although the conductor in each series of meetings usually remains the same.

Our special poultry institutes, special horticultural institutes, and special bee-keepers' meetings are increasing in attendance and interest each year. The success of this class of work has brought us to the point of holding a special sugar-beet growers' meeting, where the advantages of various sorts of seed and methods of cultivation and fertilization will be discussed; also of having special potato and alfalfa growers' meetings. All these special meetings are increasing in attendance and interest each year, and are among the most profitable features of our work.

On the whole, New York State's institutes have never been more popular than they are at the present time, and four times as many meetings were asked for the winter 1905-6 as can be held.

NORTH CAROLINA.

By TAIT BUTLER, *Raleigh*.

During 1905 the North Carolina State department of agriculture has held 81 farmers' institutes in 78 counties of the State, at which about 16,000 farmers were present. This is a much larger number of institutes than held during any previous year. On the whole these institutes have been fairly well attended, and in sections where institutes were held last year a marked increase in interest and attendance was usually apparent.

The amount of money expended for farmers' institutes in North Carolina during 1905 was about \$2,000. This is exclusive of advertising, printing annual report of 30,000 copies, salary of acting director, and salaries of the workers in the State department of agriculture, agricultural college, and experiment station, from which sources were drawn the greater number of the regular institute lecturers.

The number of institute speakers employed was about twenty, exclusive of those supplied by the local committees. Most of the work was done by the regular workers in the State department of agriculture, but some assistance was received from the agricultural college, experiment station, and United States Department of Agriculture. There were also employed several farmers within the State, and in addition the services of two lecturers from outside the State were obtained.

During 1905 in every instance where there existed sufficient interest to secure the active cooperation of a local committee of arrangements a very successful institute was held. In fact the experience of 1905 more than ever before shows clearly the necessity for local farmers' institute organizations to cooperate with and assist the general institute director. To properly advertise and arrange satisfactory programmes for and arouse an interest in these meetings active local cooperation is with us an absolute necessity. Wherever such a committee had been previously secured the institutes this year were well attended, the interest manifested was intense, and the demand for a continuation and enlargement of the work very apparent. Recognizing the fact that without the active assistance of the farmers themselves the institute work could never be properly conducted nor reach that development which its importance demands, considerable effort has been made to secure as many county farmers' institute committees as possible. Up to this time such institute committees have been organized in 77 counties, and within the next six months it is expected to complete the organization of the whole State by securing similar committees in the remaining 20 counties.

A list of the leading farmers, numbering from 200 to 500 in each county, was obtained through the justices of the peace in each township, and to each of these farmers was sent a circular letter and a copy of the programme of the nearest institute. In addition posters advertising the institutes were sent to each post-office and country store in each county and a copy of the programme published in the local and county papers. Schedules giving location and dates of all institutes were published in the leading daily, agricultural, and other State papers.

No especially new lines of work have been introduced in the sense in which I interpret the same suggested by our secretary. However, the advancement in institute work in North Carolina has been very great during 1905, but has consisted chiefly in extending and perfecting the organization and work along the old lines

pursued during the two preceding years. A much larger number of institutes have been held, more institute lecturers have been secured from among the farmers of the State, and for the first time lecturers from outside of the State have been used to a considerable extent.

NORTH DAKOTA.

By E. E. KAUFMAN, *Bismarck*.

Last year we held 61 institutes—1 of four days, 13 of two days, 18 of one day, and 29 in which but one session each was held, making the total number of sessions 140. Figured on the basis suggested by this association, the total attendance was 12,838, or 91.7 per session. The amount of money spent for institute work was \$3,948.17, which amount covers the cost of publishing the annual, salaries of speakers, etc. The number of speakers employed regularly was four, although the number appearing at institutes during the year was twelve. No change was made in the general plan of carrying on the institute work. The conductor has entire charge of the corps while in the field and plans the programme at each institute to suit the needs and conditions in that particular locality. The only new line of work inaugurated was the operation of a special seed train for one week over the line of the Minneapolis, St. Paul and Sault Ste. Marie Railroad in the State. The railway management furnished the train, and all other expenses were met from the institute fund. Twenty-seven stops, at intervals of about 20 miles, were made in five days. At each stop of one hour and thirty minutes the farmers gathered into a large passenger coach or, as was more often the case, in a hall, and talks were given on selecting, grading, and testing seed grain, with the treatment of same with formaldehyde to prevent smut. Speakers from the experiment station who were thoroughly cognizant of the conditions prevailing in the territory covered accompanied the train, and the results obtained were highly satisfactory to the railway company and the institute management. The smallest number at any stop was 75, and at three places more than 500 were in attendance. By actual count the total number meeting this train was 5,555, or an average of over 200 for each stop. Five leaflets or circulars were handed each farmer on leaving the car or hall. These circulars gave a résumé of each talk and would serve to refresh the memory of the farmer when preparing his seed grain for the spring seeding.

North Dakota is and will continue to be for years a grain-producing State, and while not in any manner neglecting live stock, dairy husbandry, horticulture, etc., the institute management believes it is the part of wisdom to pay special attention to grain raising. The object of the special train, of course, is to cover as much territory as possible and thereby reach the largest number of farmers possible in a short space of time. The railroads are benefited by the increased amount of grain they are required to haul, provided there is any increase. All three of the leading railway companies will furnish a train to the institute management next March, and it is planned to devote a week's time to each road. It will cost the institute board nearly \$1,000, but judging from past experience over 15,000 farmers will receive instruction relative to seed grain.

NOVA SCOTIA.

By B. M. CHIPMAN, *Halifax*.

I now beg to report that instead of what is called institutes in Ontario we use our agricultural societies for the purpose of holding meetings and lectures. We have now fairly well distributed over the 18 counties of Nova Scotia 166 agricultural societies, with a membership of 8,426. These societies are organized in the principal farming districts through the province, and we think, considering the fact that our land suitable for agricultural purposes does not embrace much more than one-half of the province, the other being timber lands on a rocky soil with many barren stretches, and that but little more than one-half of our population depends on agriculture, the remainder being engaged in mining, lumbering, and fishing, that our work among the agriculturists extends perhaps as far in proportion to cultivated lands and populations as most of the other eastern provinces. We have been holding institute meetings among these societies, more or less, for the last ten years. About 190 meetings have been held during the past year, with an attendance of 8,062, and in addition to this we have two traveling dairy schools going through the principal farming districts. These dairy schools held a total of 384 meetings, with a total attendance of 15,891.

Our total meetings, both agricultural and those attending the dairy school, average 45 at each meeting, which I think is very good.

About six speakers have been employed at different times with our agricultural meetings, usually two together, and the total amount expended, including the dairy school, amounts to about \$4,000. The general plan is to arrange meetings by sending out posters to the secretaries of agricultural societies. The route and date are fixed at this office and the secretaries put up the posters and arrange for the hall. I do not know that there will be much change in this line of work. The new agricultural college at Truro is now open, and these meetings will be continued largely by members of the staff and others.

OHIO.

By W. W. MILLER, *Columbus.*

Just twenty-five years ago the Ohio State board of agriculture began the work of holding farmers' institutes. An appropriation of \$1,000 was made from the earnings of the State fair, and 27 institutes were held during the winter of 1880-81. The results were so encouraging that the work was provided for and carried on by the board for ten years, and during that period 453 institutes were held under its auspices. The faculty of the Ohio State University and the staff of the Ohio Agricultural Experiment Station rendered valuable service to the cause during its experimental stage. In 1890 the general assembly, recognizing the value of the work, passed an act providing for the organization and support of farmers' institute societies. Since that time 3,070 two-day institutes of five sessions each have been held under the management of the board, or a total of 6,140 days and 15,350 sessions.

Last year there were 316 applications for institutes, but with the funds at the disposal of the board but 243 could be granted. The work began December 5, 1904, and closed February 25, 1905. From 18 to 27 two-day institutes were held each week, making a total of 486 days and 1,215 sessions; all of them held five sessions and many of them six. The total average attendance was 80,508, or an average attendance at each institute, including all sessions, of 331. In addition to these regular institutes a large number of independent meetings were held, 38 of which forwarded reports to the department of agriculture showing a total average attendance of 12,085.

The department of agriculture receives from the counties of the State \$8,375 annually for the payment of per diem and expenses of speakers, and the institutes receive an equal amount for local expenses.

The importance of local organization in this work has always been emphasized by the Ohio State board of agriculture, and the responsibility of making up programme, advertising, etc., has been placed upon each society, it being required that local talent occupy at least a part of the time of each session. In this way a personal interest in the success of the work is secured. I send to the officers of the institutes, at the earliest possible date, copies of the Institute Bulletin, which contains names of speakers and their topics, institutes to be held, with dates and speakers assigned. On receipt of this information the officers of local societies are expected to make all the necessary arrangements for holding the institutes, and as a rule they are very successful. All of the eighty-eight counties in the State have local institute organizations, and from one to four institutes are held in each county, with an average of nearly three to each.

The speakers employed by the board are all practical farmers. Some of them are graduates of the agricultural college, Ohio State University, and some have taken special training at the Ohio Agricultural Experiment Station. The professors of the agricultural college and the staff of the agricultural experiment station do no regular work now on the institute force, but they do supplement the work of the State lecturers whenever their engagements will permit.

What is generally termed a round-up we call "the State farmers' institute." The first one was held in Columbus, January 11, 1887, and a two-day State institute has been held in the statehouse every year since. It is largely attended by institute workers, farmers, stock breeders, horticulturists, etc. An effort is always made to secure specialists on the various subjects considered.

The farmers' institute has come to Ohio to stay. That the agriculturists of the State have learned its value as an educator is shown not only by large attendance, but also by active participation in the work and an earnest desire to have the number of institutes increased each year.

ONTARIO.

By G. A. PUTNAM, *Toronto*.

The following is a brief statement of the statistics relating to farmers' and women's institutes in the Province of Ontario during the year ending May 31, 1905:

Farmers' institutes: Number of meetings held, 845; membership, 22,500; attendance, 102,000. Amount of money spent (1904): Departmental funds, \$13,700; funds collected and controlled by local institutes, \$12,500. Number of speakers employed, 66.

Women's institutes: Number of meetings held, 1,406; membership, 6,968. Amount of money spent (1904): Departmental funds, \$3,500; funds collected and controlled by local institutes, \$1,200. Number of speakers, 21.

I might be pardoned if in giving the report which is asked for on the programme I transgress somewhat by making a brief statement regarding the women's institute work as we now find it in the Province of Ontario. During the winter season, when our regular farmers' institute meetings are being held, it is the custom to send a lady delegate to those points from which a special request has been received. At these meetings it is usual for the ladies to hold a separate afternoon session and to join with the farmers' institute for the evening session. The women's institutes have grown beyond our expectations during the past twelve months. Organization has been effected in eleven different districts, and we now have 70 more organizations than at this time one year ago. The membership for the year ending June, 1905, was 30 per cent in advance of the previous year, and we now have a total membership in the 69 ridings of 8,500. We reserve most of our efforts in order to make a decided success of the series of institute meetings held during the last week of May and throughout June, extending in some districts to the end of the first week in July. During the past summer we sent out 21 lady delegates and visited 327 points, at which meetings were held. The subjects dealt with at these meetings are varied, and all lines of work which have for their object the betterment of home conditions and the uplifting of life on the farm form the basis of addresses, papers, and discussions.

We have during the past year done much to enable the home makers to meet their responsibilities from day to day; have done much to direct those responsible for the menu to supply a proper dietary for the younger and older members of the family—how best to provide the most suitable foods at a minimum of cost and labor for the building and maintenance of bodily strength. The husbands and fathers have been taught to properly appreciate the necessity for sanitary conditions about the home, that the health of the family may be insured; the benefits of fresh air and sunlight have been given prominence at all times; the advisability of the average farmer using a greater proportion of vegetable and fruit diet to replace the undue proportion of meat. The boys and girls on the farm have not been forgotten; we have endeavored to plan certain lines of work which they can undertake in connection with the institute, and have also instructed the parents as to the line or lines of reading which would be of most interest and benefit to them. In fact, anything which tends to the betterment of home conditions and the upbuilding of a strong, vigorous, and noble manhood and womanhood have been considered as legitimate field for the work of women's institutes.

The general plan of work in connection with farmers' institutes has been on much the same line from year to year, and this has been explained before this association fully upon more than one occasion. We have, however, introduced special features during the past twelve months which are likely to prove of much value to the farmers, and will also tend to popularize the work of the institutes.

Fruit institute meetings in the interest of fruit growers have been held in those sections where fruit growing is the main source of revenue to the agriculturist.

Special seed growers' meetings were held in the open field at the season when alsike, red clover, and timothy were at that stage of growth when the lecturers could illustrate their lesson by the growing crop. In this way we are endeavoring to establish system and uniformity among farmers who are making a specialty of one or more of these lines.

Judging classes have also been a feature in connection with special meetings during the past summer, and we are planning to make them prominent during the coming campaign. The aim of the department is to more and more use demonstration classes and illustrative material in supplementing the addresses of the lecturers.

PENNSYLVANIA.

By A. L. MARTIN, *Harrisburg.*

We feel safe in stating that our institutes had a larger attendance last year than in any previous year, a total of 150,932. Topics discussed embraced a wide range. This of necessity must be true in a State containing such a great variety of soils, climatic conditions, and home markets. The farmers, as a result of instructions received at these institutes, are rapidly adopting the most approved methods in every department of farm operations, the results of which are noticeable in the raising of more pure-breed animals, larger crops of grain, fruits, and vegetables, and of superior quality.

The number of days of institute held this season was 327. Added to this we had three days of normal institute, making a total of 330. These normal meetings have become a fixture in the Pennsylvania farmers' institute work. Their object and aim is to better equip the institute lecturer for his work. Instructors for these meetings are engaged with reference to their ability to speak with authority on questions relating to soil, animal industry, horticulture, dairying, etc., thus bringing to the farmers' institute lecturers accurate knowledge for development of the problems and lessons which they are expected to bring before the farmers of the State. Amount of money expended at farmers' institutes the last year was \$17,500. The number of speakers employed was 63. In the localities where institutes were held many local speakers joined in the work with the State force. The State force of instructors is divided into five sections, each section going into a certain part of the State on a continuous line of travel from county to county until the schedule for the season is completed. This arrangement gives economy in travel and also convenience to the different localities where institutes are held, as they know in advance who the speakers are and on what days their institutes will be held.

We are undertaking, in addition to this valuable oral instruction, to introduce schools in the actual practice of dairying; that is, in a locality where butter is made in the creameries an expert butter maker is engaged to take charge of the ripening of the cream, churning of same, and working of butter, giving lessons to the creamery patrons, who form the school, along every phase of the work.

A meeting of this character is now billed to be held at Troy, Bradford County, on the 21st to the 23d of November. Professor Van Norman, late of Purdue University, Lafayette, Ind., now dairy instructor at State College, Pennsylvania, will have charge of this dairy school and class work.

Our experience teaches us that, as the agricultural chemist and botanist develop year after year many lessons in agriculture, the importance of the institute instructor, as well as the place he occupies as lecturer, will not have abated, but added to this oral instruction will be object lessons in butter making, plant growth and life, soil and soil moisture, spraying for fungi and insect enemies; in fact, the field is just opened up for this important line of work, which will multiply many fold the importance of farmers' institutes and their relation to the advancement of agriculture.

PRINCE EDWARD ISLAND.

By J. C. READEY, *Charlottetown.*

The general object of the campaign has been to incite a greater and more mutual interest in the vital agricultural problems of this Province. The plan has been to bring the various local institutes into closer touch with each other and thus stimulate a greater interest among the members in carrying out the details of the work. This was brought about by semiannual conventions, to which delegates from the local institutes were sent. The programme for these conventions was prepared by the local department of agriculture and submitted to the farmers' institute staff, who act as an advisory board.

Following this, the summer series of educational meetings were held. Sixty meetings were held in June and July, five speakers taking part. The delegation in every case consisted of one Dominion government official and one local man, the latter being a member of the Provincial Institute staff.

The new work consisted in the organization of an institute staff, the institution of classes in agronomy and seed work, the arrangement of excursions to experiment stations, and the holding of judging competitions and short courses in livestock judging.

Two thousand dollars was spent in the work and 1,692 members were enrolled.

QUEBEC.

By G. A. GIGAULT, *Quebec*.

The number of farmers' clubs in the Province, 575; number of members of clubs, 51,188; subscriptions of members, \$66,082.23; government grant, \$23,514; number of lecturers employed during 1904, 15; amount spent by the government for lectures, \$8,246.

A farmers' club can be organized in every parish or township of the Province. To be a member of a club one must pay \$1. The minimum of the government grant is \$25 and the maximum \$50. It is calculated according to the number of members. Many clubs own registered live stock. The law and by-laws of the council of agriculture allow them to hold competitions for standing crops, the best managed farms, as well as for milch cows yielding the greatest quantity of milk. Every member of a farmers' club receives gratuitously the *Journal of Agriculture and Horticulture*, published in both languages by the department of agriculture. In order to be entitled to a grant, a club must have at least one lecture a year.

Two experts, one on fruit culture and the other on bee keeping, are among the speakers employed by the department. Besides the lectures given by those speakers, some are also given in the Province: (1) By the professors of the St. Hyacinthe Dairy School and speakers employed by the Dairymen's Association and the Pomological Society, at meetings held by them in the Province; (2) by speakers employed by the federal government; (3) by government and syndicates' inspectors who visit the cheese and butter factories, and (4) by priests, members of the Agricultural Missionaries' Association, founded by the Roman Catholic bishops.

Lectures are almost always given in the rural centers in the evenings. In the last report of the department of agriculture of Ireland we read the following remark: "Lectures should be arranged to be given in schoolrooms or other suitable public rooms in the evenings, and should be held in rural centers. Towns and the larger villages should be avoided, as experience has shown that the greatest success attends those lectures which are given in the rural parts of a county." We believe that regulation to be excellent and follow it as much as possible. Our reports are not yet complete, but we can safely say that the number of meetings held in the Province during the year 1904-5 exceeds 900.

Since those farmers' clubs have been organized the agricultural production has greatly increased. The last census establishes that during the decade previous thereto the production of cheese and butter has increased in this Province by 341 per cent. Some exporters contend that to-day Quebec produces more dairy products than any other Province of this Dominion. That result is largely due to the dissemination of agricultural knowledge by the lecturers and the *Journal of Agriculture*.

SOUTH CAROLINA.

By J. N. HARPER, *Clemson College*.

Last year 22 institutes were held in the northern half of the State. These institutes were conducted by 7 lecturers. This winter 32 meetings are being held in the southern half of the State. At these meetings 12 speakers have already been arranged for, and as these meetings will not close until some time in January, it is probable that other speakers will be secured. This makes a total of 54 institutes between July 19, 1905, and the middle of January, 1906.

I have no means of ascertaining the amount of money spent. It was, however, confined to the actual expenses of the lecturers, who were college or station officers, receiving no extra compensation. There was a slight additional expense for advertising and correspondence with the local managers in arranging for the institutes.

The general plan of the campaign is to have those desiring an institute apply to the director of institutes requesting that one be held. When these applications are in, the dates of the institutes are so arranged as to enable the lecturers to go from place to place with the greatest economy of time.

Under new lines of work inaugurated and carried out there is one item of special interest that I can recall. The Southern Railway has loaned the college and station for institute work a day coach, which is hauled free of cost to the college and wherever we wish it to go in the State. This coach has been fitted up by the college so as to contain a commissary department, where meals are prepared and served the lecturers; sleeping accommodations also have been installed. The rest of the car space is taken up with agricultural, horticultural, animal husbandry, biological, geological, mechanical, and textile exhibits. In addition to this, arrangements have

been perfected for stereopticon views of the college and covering scientific subjects, experimental work, and other things of interest to the farmer and the public at large. This new feature of the institute work is attracting considerable attention, and the car, which has been in the field a little over a week, is being inspected by thousands of people.

SOUTH DAKOTA.

By M. F. GREELEY, *Gary.*

Up to this year there has been no regular appropriation for this kind of work and consequently there have been no institutes other than a few local ones carried on by the people of the neighborhood. Some of these, however, have been very interesting and of much value to the localities in which they were held. At the last session of the South Dakota legislature an appropriation of \$5,000 a year for the next two years was made. An institute board of three members was also created, consisting of the regent's committee of two in charge of the agricultural college, and the president of that institution, whose duty it shall be to have full charge of this work in the State, selecting a superintendent, auditing accounts, etc. This board made M. F. Greeley, of Gary, superintendent of institutes, and empowered him to hire such assistants as he deems necessary to effectually prosecute the work.

It has been decided to hold an institute in every county in the State during the present year, the same to be held at the most accessible point in the county, presumably the county seat in most cases. During the month of July institutes were held in the six counties of the Black Hills. The attendance at these meetings averaged 173 to the session and 519 to the institute. It should be remembered that homes out here are scattered. Many farmers drive from 20 to 40 miles each way, and when weather is stormy and roads bad it almost does away with the meeting.

In addition to these meetings we have up to December 8 held 13 meetings east of the Missouri River. Most of these have been single-day meetings with evening session, and have been well attended. The force consists of four speakers, including the conductor. While the experimental work of the agricultural college will be ably represented by one or two of the workers there, it is intended to confine the speaking largely to strictly practical men, who come directly from their well handled stock and farms to the platform.

It is proposed to have the home well represented, and the meetings are made interesting to women and young people as well as to men. Particularly are the evening sessions and the latter part of the afternoon sessions arranged with this object in view. At the summer meetings demonstrations in cooking were given in the morning in a separate hall, but in the winter meeting this work is restricted to talks on plain foods, right living, and home making by Mrs. Bertha Dahl Laws. It is proposed to carry out this plan throughout the entire year's work, so as to insure at the start the equal representation of the work of the home with the work of the farm.

UTAH.

By P. A. YODER, *Logan.*

Our State legislature has made appropriations of \$1,500 annually for the farmers' institutes. From this appropriation are paid the traveling expenses of the speakers and the incidental expenses in holding the meetings, in advertising the same, in securing office and stenographic help, and in the publishing of a Farmers' Institute Annual. The lecturers work without pay from this fund.

The management of the farmers' institutes is vested in the faculty of the agricultural college. A committee of this faculty is appointed by the president, of which the director of the experiment station has thus far always been chairman. This committee has the immediate charge of the work and corresponds with the officials of local organizations, or where no local organizations exist, then with prominent citizens, to arrange for the calling of meetings. The law requires that at least one institute be held in each county each year. The fact that the settlements in some counties are so far from the railroads, and that the railroad and stage fares are high, makes it both time-consuming and expensive to reach all counties each year. Most of the institutes are held during tours, in each of which a number of places are reached. The most opportune time for these tours is during the week between Christmas and New Year's, when our absence from college least interferes with that work. We, however, do not limit ourselves to any particular time in the year for these tours. We are often enabled to lessen expenses considerably by combining

farmers' institute work with our regular inspection trips to the outlying experiment substations, of which we now have provision for eight, viz, six arid farms, a southern Utah experiment station, and a central Utah experiment station.

Two or three speakers from the agricultural college are usually sent on each of these farmers' institute tours. Practically all heads of departments on the experiment station staff have been thus called on to participate in the work of the farmers' institutes, besides many of the assistants and other members of the college faculty. Among the latter I desire to mention especially our professor of domestic science and her assistants. Their work among the women at the farmers' institutes has been productive of much good.

Where possible to find local speakers to help in the meetings, we encourage such participation. Usually a considerable part of the programme is given up to questions and answers, or discussions which such questions evoke.

The lines of work touched upon are too varied to enumerate here, but those touched on most frequently or presented most extensively are arid farming, duty of water, alkali land reclamation and prevention of alkali troubles, organization for grading and marketing fruit, combating the codling moth and other insect pests, the dairy industry in diversified farming, and the application of thoughtful and scientific methods in household economy.

There have been no distinctly new lines of work introduced, but a few features in which we diverge somewhat from previous years are, first, we have held more county institutes as distinguished from meetings in the individual small settlements; second, we include in the Annual more nearly the exact addresses given and the questions and answers as presented; third, at the State fair this fall we joined with the experiment station exhibit some farmers' institute work by delegating several members of the station staff to explain and elaborate on the things there exhibited to the visitors as they pass along or congregate around the experiment station booth.

Personally, I am impressed with the advantages in the arrangement, whereby the members of the experiment station staff and the agricultural college faculty thus get out into the various farming communities. There accrue from it reciprocal benefits that far overbalance the inconveniences resulting from some interruption in the regular work at the station and college. Hardly any other one thing gives us as good means of learning what are the live problems confronting the agriculturist, or what presentation will make the theoretical and experimental deductions most useful to the farmer.

VERMONT.

By GEORGE AITKEN, *Woodstock.*

According to Vermont law, we are obliged to hold at least one meeting in each county every year. During the months of December, January, February, and March we held 40 meetings. Average attendance, 125; amount of money spent, \$1,882.05; number of speakers employed, 17. We find the best results from working in connection with the Grange and in the back towns, remote from railroads and large cities. New lines of work taken up last winter were "Alfalfa for eastern farmers" and "Agriculture in our rural schools."

VIRGINIA.

By A. M. SOULE, *Blacksburg.*

During the past year the farmers' institute work in Virginia has gone steadily forward; probably it marks the inception of the real development of farmers' institute meetings as understood and appreciated in many of our States. From September 1, 1904, to September 1, 1905, more than fifty meetings were held in widely scattered sections of the State, eight out of the ten Congressional districts being visited.

The amount of money appropriated for farmers' institute work amounts to \$5,500. A member of the State board of agriculture is appointed from each Congressional district, and \$500 is apportioned to each man. There is also an ex officio member of the board who has \$500 at his disposal, and he has seen fit to turn this money over to the defrayment of the expenses of the annual meeting of the Virginia State Farmers' Institute. The \$500 given to any Congressional district is at the disposal of the member therefor, and in most instances the members have seen fit to spend their quota.

The number of speakers employed at the meetings has never been over four in any case. As the work is so new in this State it has been difficult, if not impossible, in many instances to get local speakers, and the brunt of the battle has fallen on the shoulders of the experiment-station men. As a rule, two men from the station attend

a one-day institute, and where two-day meetings are held two or three and sometimes four men go.

The most of the meetings held so far have been largely organized and advertised through the efforts of the administrative officer of the station. As a rule, the application has come to the director of the station and he has corresponded directly with the member of the State board interested and asked if it would be agreeable to him to have meetings arranged for in his district. Meetings have been held in series to cheapen the cost. An advertising agent has been sent out in advance to visit the county towns where the meetings were to be held and interview the newspapers, put in notices of the meetings, and have programmes printed and distributed. The county superintendent of instruction has been approached and asked to have the teachers announce the meetings. Posters have also been sent to the postmasters, to the school-teachers, and put up in all the public buildings and stores in the county town and adjacent ones as well. In this way a general interest in the meetings has been aroused, and the attendance has been remarkably good considering the newness of the work. Fully 8,000 farmers were present at the meetings held the past year.

No new lines have been inaugurated. The plan outlined has succeeded remarkably well, considering that little systematic effort has been made along institute lines previous to this time. Our farmers are anxious to learn and attend the meetings willingly when they believe some information of value is to be obtained. The principal subjects discussed were as follows: Soil renovation and improvement, the purchase and utilization of commercial fertilizers, live-stock diseases and their treatment, selection and improvement of corn and other cereals, and the feeding and nutrition of farm live stock. As a result of the institute work a new interest is evidenced in agriculture. This is shown by the large increase in the correspondence received at the station. There is also a greater demand for literature relating to agricultural subjects, and there is a growing interest in the introduction of agriculture in the public schools of the State.

The round-up meeting held in Roanoke last July was highly successful, more than 500 farmers attending from all sections of the State. An excursion was planned to the experiment station at Blacksburg and practically all the delegates attended. They were highly gratified and delighted with the work in progress at the station and indorsed all the efforts being made to obtain information of value to the farmers of the State through the researches now in progress at the station. The interest in the work continues to grow and plans for this year are being undertaken on a much more comprehensive scale with the belief that the results in the future will be more gratifying than in the past. There are certain defects in the system which are appreciated by those connected with the work, and in the course of time these will no doubt be remedied. There is a growing interest in farmers' institutes. Our farmers realize the necessity and value of agricultural education, and are becoming insistent on their rights to receive the attention along educational lines which the importance of their industry makes imperative.

WEST VIRGINIA.

By J. B. GARVIN, *Charleston.*

About four-fifths of the institutes are held before the late fall months, in order to avoid the possibility of interference by bad roads. In sections where the farmers are more highly favored with macadamized roads the institutes are usually held during November, December, and January. For this reason our report gives a part of the work in 1904, as well as 1905. During the period mentioned 83 institutes have been held. Forty-seven were one-day institutes of two sessions each, and 36 were two-day institutes of six to eight sessions each. In some instances the two-day meetings were arranged to begin at noon the first day, which accounts for the difference in the number of sessions for the two-day institutes.

We have always endeavored, in so far as possible, to secure an accurate account of the number in attendance at each institute, but we have not been able to accomplish this in every case. The number given as the attendance, partly estimated and partly by actual count, is 13,183. This hardly measures up to the estimated attendance of former years, but it is not entirely due to lack of interest, for some of the largest attended and most interesting meetings have been held this season that we have recorded in the history of the institute work in the State. In all, fourteen speakers were employed. As a rule two speakers were assigned to each institute. The total cost of institutes for the fiscal year, not including the salary of the superintendent of institutes, is \$2,375.35. The expenses are paid by the State board of agriculture out of the funds appropriated for the use of the board.

Among the special features that might be mentioned is what we term schools of agriculture for the farmers. Two of these schools have been held during the year in two different counties, instead of the regular annual institute. In one county the school was held for six consecutive days, and the instruction imparted consisted of various subjects of interest to farmers. The other was held in a community where more attention is given to dairying by the farmers, and five days were devoted to special instruction in dairying.

Where these schools have been held great interest has been manifested and the farmers have asked for a continuance of the school rather than hold a two-day institute. The board furnishes two instructors and the average cost of each institute, and the farmers attending the school pay for any additional instructors they may wish to have.

The work of the superintendent of institutes has been mostly confined to the office, but it is proposed that hereafter he shall devote a part of his time to field work, in order to establish better local organizations, for herein lies to a very great extent the success or failure of the farmers' institute.

WISCONSIN.

By GEORGE MCKERROW, *Madison.*

During the past year we held 81 meetings lasting two days each and 1 meeting lasting three days. The number of speakers employed was about thirty. Our plan of campaign was to cover the State as evenly as possible, so that each farmer in the State could reach a meeting without having to travel too far. No new lines of work were followed, but some of the old lines were enlarged upon, especially such as lawful milk, cleanliness in dairy products and their manufacture, the growing of alfalfa and sugar beets, and sheep husbandry. The old topics, such as all phases of dairying, horse breeding, swine breeding, horticulture, road building, production of poultry products, health of our animals, especially as it deals with the question of tuberculosis, home life, domestic science as it relates to the cooking of foods, agricultural education, and the rural schools, and in fact all of the topics that we have been able to think of in relation to improving the farm home, the best farming and the development of the farmer and his family, have been discussed. We have issued and distributed the annual Wisconsin Farmers' Institute Bulletin, 60,000 copies of a 320-page handbook of agriculture, covering the above-mentioned topics as discussed at the farmers' institutes, with a full report of talks, questions, answers, and discussions at the three-day closing institute meeting.

REPORT OF THE FARMERS' INSTITUTE SPECIALIST OF THE U. S. DEPARTMENT OF AGRICULTURE.

By JOHN HAMILTON, *Washington, D. C.*

Institutes have been held during the year ended June 30, 1905, in all of the States and Territories of the United States, excepting five—two States (Florida and South Dakota) and three Territories (Alaska, Indian Territory, and Porto Rico).

Reports for the year, giving the condition of the farmers' institute work, have been received from all of the States and Territories holding institutes, except four—Missouri, Tennessee, Rhode Island, and Vermont.

Forty-two States and Territories report 1,714 one-day institutes, 1,262 two-day institutes, and 120 three-day institutes—a total of 3,096 institutes, composed of 10,153 sessions.

Forty-one States and Territories report a total attendance of 977,082. Thirty-seven States and Territories report appropriations by the State and Territorial governments for institute purposes amounting to \$197,082.13. Appropriations for the year from other sources amounted to \$20,056.76. The total cost of the institutes was \$204,975.79. The appropriations for the coming year (1905-6) as reported by thirty-six States, amount to \$208,907.62.

Forty-five States and Territories report 992 State lecturers upon the State teaching force. Three hundred and thirty-eight of this number were from the faculties of the agricultural colleges and the staffs of the experiment stations. These officials contributed 2,622 days of time to teaching in institute meetings. The whole number of days of institutes reported is 4,598.

Assuming that the four States that have not yet reported have held their own in all respects, we have by adding the items in their reports for the year ending June

30, 1904, to the above totals a considerable advance in institute activity in all directions. The figures corrected by the addition of the data as given in 1904 for the four States mentioned show that there were 1,935 one-day institutes held during the year ending June 30, 1905, an increase of 180 over the previous year; that there were 1,317 two-day institutes, a decrease of 159; and that there were 123 three-day institutes, an increase of 48; that the total number of institutes was 3,375, an increase of 69; that the total number of sessions was 10,810, an increase of 188, and that the total attendance was 1,027,022, an increase of 185,324.

The appropriations by the States increased \$11,466.01 and the appropriations from the colleges and other sources increased \$9,257.10. The total cost of the institutes was \$219,541.04, an increase of \$16,474.48. The appropriations for the coming year of 1905-6 amount to \$232,847.62, an increase of \$9,683.62 over that of the year ended June 30, 1905.

There are 992 State institute lecturers, an increase of 39. Three hundred and sixty-six of these lecturers were from the faculties of the agricultural colleges and the experiment station staffs, an increase of 5. The college and station lecturers contributed 2,646 days of time, an increase over the previous year of 515 days. The total number of days of institutes was 4,938, an increase of 95.

The Department during the year issued a number of publications relating to the institute work; a bulletin on Agricultural Instruction for Adults in the British Empire; also a number of syllabi of lectures on agricultural topics accompanied with lantern-slide illustrations. The list of State directors has been revised to September 1, 1905, and a new list of 1,581 names of local managers of institutes has been secured, all of whom are being supplied with institute literature. Bulletin No. 135, entitled "Legislation Relating to Farmers' Institutes," has been revised, brought up to date, and is about ready for distribution. Several courses of study are being prepared for use in movable schools, one on cheese making, one on butter making, one on poultry rearing, and another on fruit growing. Each course will require about fifteen days to complete. Each lecture is accompanied by a practicum, which each student is expected to take, which will occupy from one hour and a half to three hours of time each day.

A bulletin entitled "Agricultural Instruction for Adults in Foreign Countries" is in the hands of the printer, and another giving a history of the origin of the farmers' institute work in each State and Territory has been prepared.

MORNING SESSION, FRIDAY, NOVEMBER 10, 1905.

The convention met at 9.30 o'clock a. m., the vice president, Mr. E. A. Burnett, in the chair.

RESOLUTIONS.

The committee on resolutions, consisting of F. H. Hall, of Illinois, John Hamilton, of Washington, D. C., and H. T. French, of Idaho, reported as follows:

COMPUTING ATTENDANCE.

In view of the inaccuracy and misleading character of the method now in use by this association for computing institute attendance; Therefore be it

Resolved, First. That hereafter the number in attendance at each session of each institute shall be ascertained by actual count and recorded, and the aggregate of all of the sessions shall be reported as the total attendance for the year. This aggregate divided by the number of sessions shall be regarded as the average attendance at each session.

Second. That attendance at the annual round-up of institute workers, outdoor picnics, harvest home meetings, and similar assemblages of farmers addressed by institute speakers, shall be reported separately from the regular institutes, the total attendance for the entire meeting to be given instead of the number present at each session.

STANDING COMMITTEES.

Resolved, First. That standing committees be created, consisting of three members, to be nominated by the executive committee upon the following subjects:

- (1) Institute organization and methods.
- (2) Institute lecturers.

- (3) Cooperation with other educational agencies.
- (4) Movable schools of agriculture.
- (5) Boys' and girls' institutes.
- (6) On women's institutes.
- (7) Legislation.

Second. That it shall be the duty of the standing committees to consider during the intervals between the annual meetings of this association the subjects severally assigned, and report the results of their investigations to the annual meetings of the association, accompanied by such recommendations as they may deem proper to present.

FEDERAL SUPPORT FOR FARMERS' INSTITUTES.

Whereas the Secretary of Agriculture is recommending to Congress an increase of the appropriation for the maintenance of the farmers' institute work of the Department: Therefore be it

Resolved, That this association expresses its gratification at the action of the Secretary, and pledges its support before the committees of Congress in the effort to secure the recommended legislation.

PLACE AND TIME OF MEETING.

Whereas we believe the best interests of this association will be advanced in insuring better attendance through transportation arrangements by meeting at the same place as the Association of American Agricultural Colleges and Experiment Stations and at as nearly the same date as possible: Therefore be it

Resolved, That the executive committee of this association be hereby authorized to confer with the executive committee of the above association in fixing the time and place of next and all subsequent annual meetings of this association, and that the by-laws of this association be so changed as to give the executive committee this authority.

MISCELLANEOUS.

Whereas the honorable Secretary of Agriculture, James Wilson, Assistant Secretary W. M. Hays, Director of the Office of Experiment Stations A. C. True, and Mr. John Hamilton, through his official capacity as Institute Specialist, have been present at the meetings of this association and taken an active part in its deliberations: Therefore be it

Resolved, That we express our sincere appreciation of their valuable services, and to all others of the Department of Agriculture who have in any way contributed to this meeting, and that we hope these interests may continue as in the past until this association shall occupy, if it does not already, a prominent place in directing agricultural education in this country.

Whereas the railroads entering the city of Washington have so generously granted reduced rates for delegates and visitors to this annual meeting: Therefore be it

Resolved, That we extend to them an expression of our appreciation of their services by passing this resolution.

The resolutions were adopted.

EXTERMINATION OF GYPSY AND BROWN-TAIL MOTHS.

J. L. Ellsworth, of Massachusetts, offered the following resolution:

Whereas the gypsy and brown-tail moths have been a great menace to the people of Massachusetts in damaging and destroying forest, fruit, and ornamental trees and shrubbery; and

Whereas they are likely to spread and become a great calamity throughout a large portion of the United States unless their ravages are checked: Therefore be it

Resolved, That we recommend or favor aid from the Federal Government for the extermination of these pests.

The resolution was referred to the Secretary of Agriculture for such disposition and action as may seem proper to him.

ELECTION OF OFFICERS.

W. L. Amoss, of Maryland, read the report of the committee on nominations, consisting of W. L. Amoss, E. E. Kaufman, of North Dakota, and F. H. Hall, of Illinois, as follows:

Your committee on nominations reports as follows: For president, G. C. Creelman, of Guelph, Canada; vice-president, W. W. Miller, of Ohio; secretary and treasurer, John Hamilton, of Washington, D. C.; executive committee, J. G. Lee, of Louisiana; F. H. Hall, of Illinois, and W. L. Amoss, of Maryland.

The report was adopted and the officers named declared elected.

At 11.45 o'clock a. m. the association adjourned until 8 o'clock p. m.

At 12 o'clock noon the members of the association were received by the President of the United States.

EVENING SESSION, FRIDAY, NOVEMBER 10, 1905.

The convention met at 8 o'clock p. m. at the National Hotel, the vice-president, E. A. Burnett, in the chair.

W. M. Hays, Assistant Secretary of Agriculture, was introduced, and spoke as follows on the subject of consolidated schools:

CONSOLIDATED RURAL SCHOOLS.

The United States has been a remarkably fertile and an extensive field for experiments in systems of education. For city life three classes of schools, articulated into a unified whole, have well-nigh occupied the entire field. Elementary education for nearly all city and village pupils has been supplied by the city graded schools; the city high schools provide secondary education of a general character to large numbers and industrial education and technical education to a small number. State universities and State colleges, except in the older States, have become the distinctive institutions for the higher technical and professional learning of that comparatively small number who enter the professions. The public graded schools are supplemented by parochial and private schools; the high schools are supplemented by academies, business schools, and other institutions of secondary grade, and the institutions for higher learning are supplemented by universities and colleges not supported by public funds.

Education in the primary graded schools is taking a somewhat more practical turn, as is indicated in the development of nature-study courses, manual training, and industrial work. Public high schools are giving more attention to the practical affairs of the city life. Our institutions of higher learning are paying more attention to the preparation of teachers for instruction in practical lines in the secondary and primary schools, and there is a tendency all along the line to give more time and attention to the industrial and technical work which nearly all city-born people must of necessity engage in.

A system of schools for country-life education was started when Congress passed the act which resulted in the establishment of land-grant colleges of agriculture and mechanic arts in each State. Thus taking the lead, Congress turned the attention of educators toward specific instruction for those who are to manage farms and farm homes. These agricultural colleges, planted among the old-line institutions of the country, are requiring half a century for their organization so as to lead efficiently in country-life education. A goodly proportion of them have already reached a permanent status in their work and are turning out both agricultural technicians and a fair number of farmers technically educated for their business. Under some of these colleges a system of agricultural high schools is being developed, also numerous short courses, but the movement to carry some of the more important elements of technical education along the lines of country-life affairs to the elementary rural schools has gone forward but slowly.

To be as well adjusted as are the three classes of schools for city life, the colleges of agriculture, agricultural high schools, and rural schools, both consolidated and isolated, need to be articulated into a unified system. An agricultural college in each State, an agricultural high school in each ten counties or even one in each

county, a consolidated rural school in each district of 20 to 36 square miles or one isolated school in each district, will make a system, and country children will have a ladder to climb as do city children now.

Obviously, the function of the agricultural college, and even of the agricultural high school, can never be to give technical education to the farmers as a whole. These institutions can reach only a relatively small number of people. The function of the agricultural college and agricultural schools of secondary grade in relation to the whole number of those who are to farm must be mainly that of preparing teachers and leaders. But this is a most important function, and these institutions are gradually rising to successfully meet the problem. They must be greatly increased in size to prepare a sufficiently large number even for teachers.

Elementary schools, university extension work, books, and periodicals must be the main agencies for bringing industrial education to the great mass of the people who do not go beyond the elementary school. The rural school is the greatest agency through which to work because it reaches practically all of the youth who are to form the ranks of the farmers in the coming generations.

Steps that will better prepare the rural schools for giving agricultural instruction, and that will put into pedagogical form that body of thought which is being rapidly wrought out as a suitable basis for such instruction, have the widest significance.

The little rural school which has had such a wonderful national influence has not proven well adapted to taking on lines of instruction related to country industries. These studies have two requirements not well met by the little rural school. They can not be given without some equipment, and teachers especially trained in agriculture and home making are a prime necessity. The consolidated school as developed in northwestern Ohio and in other sections of the country, as compared with the little rural school, offers greater advantages as an institution into which to introduce industrial work.

Farming communities producing sufficient wealth so that with some State aid they can provide good school equipment and superior teachers and can pay the cost of hauling pupils to and from school can not afford to overlook the advantages of rural school consolidation. Here the first requisite, a teacher trained not only in the common studies but in agricultural subjects, can be afforded, usually as the principal of the school. An assistant trained in home economics is also within the range of financial possibilities. The better grading of the school also affords an opportunity to find a place and time for the introduction of technical subjects. A larger school building makes it possible to find a place for doing laboratory work and practice work. Larger grounds and their equipment may also be provided. Plants, school gardens, orchards, and even small field plats can be had for demonstration and instruction purposes. Simple laboratory apparatus can be afforded for instruction in both agriculture and home economics.

When viewed as a whole, only a part of this country and Canada can hope to support the consolidated rural school. In all thinly populated sections, and in sections where the soil does not produce abundantly, the higher cost of the consolidated school per square mile will make it impracticable to change from the isolated school. While the problem of introducing special country life subjects into the little rural school may remain the larger and more important problem because it applies to the larger number of pupils, methods of carrying this instruction to the lower schools may best be wrought out in schools with somewhat better organization. It may be that many of the teachers in the little rural school can be in part trained in the larger rural school, as well as in county and State schools of agriculture and in normal schools, provided with more or less of instruction in agriculture and home economics.

There are vast regions where the appropriation of money per square mile for the support of consolidated rural schools will several times over warrant the additional expense. No universal plan can be adopted. Generally speaking, there should be a plat of land, say 5 or 10 acres, a schoolhouse of three to five rooms, a principal's cottage, and small outbuildings. The land might properly be divided with 5 acres for field crops and 5 acres for campus-like area for buildings, shelter belt of trees, plantations of trees and small fruits, gardens of vegetables and flowers, and also ample playgrounds. The principal should be trained to give instruction in agriculture, and one of the assistants should be trained to teach in home economics. There should be collected some apparatus in the building for technical instruction, and a library concerning rural affairs and home making adapted to the needs of the adults of the community, as well as to the pupils, should be built up. Not a small part of this could be made up of publications from national and State departments of agriculture. And if a large number of centralized rural schools were so organized as to make good use of such publications, their numbers could no doubt be increased and in some cases designed for specific use by such schools.

The plantations of trees, vegetables, and ornamental plants could be made to serve a most excellent purpose for instruction by demonstration and practice methods. The pupils could be taught how to grow many things of which they would never learn on the home farm, and they could be trained to do many of the manual operations commonly done on the farm in a much more effective manner than they would be taught at home. On the land set apart for field crops lessons could be taught in farm management, crop rotation, fertilizing the soil, and methods of preparing the land and of planting, cultivating, and harvesting field crops.

But the most valuable opportunities are those where the school and the home and farm can be brought into cooperation in the training of the child. The plan of the child's home farm, the methods of handling each crop, the manner of producing each class of animals, the management of the general housework, the decoration of the home, the cooking and the sewing, all are lines of work in which ways of bringing cooperative action between the teacher and the parent may be introduced into the training of the child. How this may be done has not been worked out in detail, and no doubt, even after a large amount of instruction has been published along this line, the local conditions surrounding each teacher will require the constant devising of new ways and means.

This instruction will connect the school life with the home and farm life. It will give to the education a practical realistic turn, which, while avoiding the bookishness of education, will lead to placing a higher value on books. Not only will technical books be better appreciated by the pupil, because the school will be more practical, but this connection of school work with actual things will give greater stimulus to all school work. Parents will be more willing to have their children remain for a longer time in the school that will give them training in practical affairs, and this longer period will provide more time for the general and cultural studies and give the pupils a larger experience among people. One of the great advantages of the larger school is that the pupils have more training with folks. They are not subjected to the usual isolation of the farm at so youthful an age.

These schools can better be made centers of social and other activities than can the little rural school. Here the grange and farmers' clubs can center, and lectures and meetings for various purposes can be held in the school with two of its rooms opened together forming a hall. Modern stereopticon and moving-picture devices make it practical to give much instruction in agriculture to pupils and adults where such places for meetings are available. The vans used for conveying the pupils to school can be utilized to collect people for meetings. Contests at athletic games between schools will extend the acquaintance of pupils beyond their own district. One of the advantages of the larger district is that pupils during their school age become acquainted with hundreds instead of with only scores of their neighbors. There is a wider acquaintance from which to choose friends and lifemates and a wider knowledge of people with whom to do business.

Schools thus organized with teachers technically trained would rapidly develop methods and would devise ways and means of giving practical instruction, meanwhile the larger and more highly organized school would be better developed in general education. And the county inspectors having fewer schools to visit would be far more effective than now in building up corps of teachers, in securing good methods, and in developing a public sentiment more loyal to a splendid school system. With the development of teachers trained in country-life education there will be available those especially successful, who, as county inspectors, can help to create a new curriculum and a new spirit in our rural schools.

Every farm community which has productive land should investigate the practicability of consolidating their rural schools on some such plan as outlined above. And every rich State should carefully consider giving large State aid to this class of schools. Possibly the State could undertake to pay for the purely industrial features as it pays for the special education of those who attend the State institutions of higher learning. It might be a good plan for the State to assume the cost of technical education in city high schools also. The consolidated rural school course can be extended to the end of the second high school year, as has been amply proven by the experience of consolidated schools already existing, thus making it practical to introduce much technical instruction.

There are needed numerous experiments on a not too expensive scale to determine lines that are practical in developing country-life education in rural communities. Those in Canada, Illinois, Wisconsin, Minnesota, Alabama, Tennessee, and elsewhere are pointing out many difficulties and are developing numerous successful features, more or less applicable in the consolidated rural school, and some of them will be helpful in the isolated rural school. The texts, the laboratory helps, the leaflets, the correspondence course, the children's nature clubs, and other devices of bright teachers and promoters are all bringing forward the movement for better and

more practical education in rural communities. The consolidated rural school, where the expense can be borne jointly by the locality and the State, thus makes it possible to introduce more of the studies in agriculture and home making. It can not be hoped that a sufficient number of those who teach in the isolated rural schools will be trained to teach these practical subjects. Where six or eight schools are consolidated into one, only one teacher is needed who knows how to teach of the farm and one of the home making.

The supply of teachers so trained for even this small number of schools will be short, and the combined efforts of all schools which teach agriculture in long courses, in short courses, and in special teachers' courses will be required to furnish such teachers in response to a normal and healthy growth of the consolidated movement.

The opportunity to serve his community which is offered to the principal of a consolidated rural school organized as above should not be underestimated. The tactful teacher who can unite all the available sources and use to advantage all the facilities of the school and of the farm community, and who can be a leader in the industrial thought and plans of the community, can do much to establish country life on a better basis. The teacher who thus has the opportunity to lead in the thought relating to the making of country homes also should not underestimate her opportunities. The higher standards of farming and of country living once established will be kept alive by custom. Modern advancement needs this better agency to bring more rapidly to the farm and the farm home the results of the world's genius.

Districts with lands not sufficiently productive to support consolidated rural schools will be greatly benefited by consolidation where consolidation is practicable. Not only will the centralized school serve as a place in which methods of teaching rural industry will be so worked out that much of this work can be placed in the smaller rural school, but these larger schools with longer and more complete courses of study will do much toward supplying teachers so trained that they can successfully teach the special as well as the general subjects in the smaller schools.

Those who are so situated that they can experiment with instruction in rural schools, who can devise new methods, and prepare and publish helps, have most important opportunities. The successful elementary texts which may be sold in hundreds of thousands or millions of numbers is a most important agency. The pioneer who may work out the basic plans for managing rural school gardens will have the satisfaction of having done a most useful work. Those who make material advancement in devising plans under which the rural school-teachers and the parents can make the home duties a part of the school instruction will have done most worthy service. Those who successfully arrange normal and secondary school courses which combine education in general studies, in technical subjects, and in normal training so as to provide a competent corps of teachers for rural schools, centralized and isolated, will have done the greatest service of all. If the next forty years witness as great advancement as has been seen since the first agricultural colleges were started forty years ago, we shall have instruction in agriculture and home economics placed on an even basis with education in any one of the three R's. Even the mountaineers will have some knowledge of the soil, of the plants they grow, and of the animals they use. They will have the three R's keys to knowledge, and will share in the flood of treasured printed matter on all phases of life, including their own environment. The mountain sides will yield them more bread and more meat, and the mountain home will take on more of the modern spirit and be supplied with more of modern conveniences. The farms in the regions of rich soils will continue to develop as they have developed in the past forty years, and American country life will grow and keep pace with the better side of our city life.

Our national and State governments have done much toward formulating and directing country-life education. Funds from the larger public organizations can have two functions. It can help to actually pay the cost, and it can be judiciously handled so as to encourage the larger more local organization, as the county or the local district, to supply more funds and to use it in more practical lines.

The consolidated rural school movement is of prime importance in districts with rich lands, because consolidation makes possible many other things, including the enrichment of the soil, making larger the net profits per acre, and giving above all this a broader civilization, better homes, and a better crop of young men and young women to become managers of our farms and farm homes, with a small surplus to be sent into city life.

F. H. HALL, of Illinois. We have only one single instance of school consolidation in the State of Illinois, and that was only brought about after many years of effort. The county superintendent, of whom you have all heard, I am sure, Mr. Kern, went

over into Ohio and took with him two people at least from his own county, one of whom was opposed to school consolidation; and while he had him over there he got him converted, and he went back and established the school. I can not speak now as to the numbers, but there are at least 25 per cent more pupils in attendance from the same territory than were in attendance under the old plan, and they have two years of high school where they had none before; and the cost only slightly exceeds the cost of the schools as they were organized before. I think I may say it is true that almost unanimously the people now approve the plan; and yet we are finding great difficulty in organizing such schools in other parts of the State. We have formulated a plan for that purpose, and hope to bring about good results.

H. T. FRENCH, of Idaho. We have a large tract in the southern part of the State, of some 200,000 acres, which has recently been brought under irrigation. This land was withdrawn under the Carey act, and was nearly all sold and is being settled rapidly, and the company reclaiming the land has set aside 5 acres in the center of five different townships in this tract for the purpose of building township schools. Those schools are some of them under construction, and they will all be soon completed and they will be the only schools that we have. The idea will be to bring the pupils to the schools, which will be graded schools, in a measure, and which will teach agriculture. Our State superintendent is entirely in sympathy with the idea of teaching agriculture in the public schools, and we have succeeded in putting some leaflets in the State course of studies. That is an experiment to some extent, but it is being watched with interest, and I am sure it will result in much good and that the consolidated school system will be established, at least in our State.

G. C. CREELMAN, of Ontario. I would like to say one word and for one reason only. My children attend a consolidated school, the only one we have in our Province, and we are all so well satisfied with it that I do not think there is any danger whatever, although it is only on a three years' trial, that we will go back to the one-room school. We have a radius of about 5 miles. The farthest families are 5½ miles away, but the majority are within the 5-mile limit; and the children come in every morning and go out to their homes every afternoon after 4 o'clock.

When we went about among the one-room schools asking for the lists of children we found there were 95 in all in school attendance, on the average, in those five-school sections all put together. Those one-room schools were being conducted very largely by young lady teachers, some of them very young ladies, not getting, some of them, more than \$300 or \$350 a year for the work. After consolidation, much to my surprise, there came to the school on the day it opened more than 150 children from those sections; and to-day, out of the same five sections, there are, although we opened only in November a year ago, over 200 in actual attendance.

Now, in finding out just exactly how that came about, we discovered that children who had quit school one, two, and three years ago, and some of them as long as five years ago, were coming back to the graded consolidated school to finish their education, because with the more experienced and skillful teachers they were able to get additional benefits which had been impossible when the teacher in the schoolroom was some young girl, herself not out of her teens and hardly out of her fifth book, who had come back to teach them.

Then the little tots from 5 to 8 years old are coming. I live up in what is called sometimes the frozen north; I live in Guelph, Canada. In January, February, and March of this year there were 22 children in the primary grade there who did not miss a day, some of them coming 5 miles to school every morning. Most of these little tots would have been shut out entirely from the one-room school, where they had to go a mile or a mile and a half through the snow and on foot.

The only thing that will ever throw out the consolidated school is the expense, which has proved to be greater than was ever anticipated. When you take the cost of hiring teams at from \$2 to \$3 a day every day, or five days a week, and sending them

out to bring in the pupils, in addition to the better salaries you have to pay teachers if you want a better school, and add all that to the cost of the consolidated school itself, it is not perhaps more than the cost of the five schools used to be; but the cost of the teams and hauling, and the cost of the better transportation you engage, is going to make it so expensive that in our country the average farmer is going to have to be coerced or driven into the consolidated school. As a matter of fact, we have been getting education in the country places too cheaply. The average that was paid toward the school fund by the farmer was so small that it was practically nothing. And now Sir William McDonald, whose name was mentioned yesterday, is going to put up all the money except what they have been paying in their taxes and in the individual schools. He is now putting up the difference between what they have paid and what it will cost for the consolidated school. He is going to go down into his pocket for that money for a five-year experiment. Each child has a little farm of its own in the school yard. This feature worked so admirably that the children of our consolidated school to the number of 200—the vote being unanimous—decided to come back one day a week during the summer vacation to look after those little farms rather than have them neglected during that time. I do not think you could have any better test of the value of that work than just that illustration, that those children would come back during their summer vacation to do that work in that way.

GEORGE AITKEN, of Vermont. While I was in Mexico I saw something that struck me forcibly. Just at the close of the school hours we met on the streets bands of children, the girls with the female teachers attending them, and the boys attended by the male teachers; and upon inquiry I found that they were looking after them to the train. They saw them safely to the train, and they were distributed to their homes at the various stations. I thought that was an ideal condition, perhaps much ahead of anything we have had here. I know nothing of the conditions in the schools there, but I thought that was to be admired.

O. C. GREGG, of Minnesota. In our own district consolidation has but just commenced. I could say more about the difficulties in organization than I can about the effect of the schools. We had to face the expense of new buildings, and we had no individual who would put up the money. We had first under our law to hold a meeting first in one district and then in the second. We went up with a majority of about two-thirds, and then as people came to look at the system it grew in favor. The schools started this last fall, and we find that we have an increased number of pupils. Of course we have the benefit of the grades. We find, also, some of those who opposed this union of these two districts, making about half a township, saying that they never would send to the school, arranging of themselves to bring the pupils to the schoolhouse. And in the northwest, where the creamery interest is a large one, and we are sending our cream to the stations, it looks now as though there would be a combination of hauling cream and children; and in that way, you see, you get the cream of the farm in two ways and both kinds just where you want them.

A. J. KAILER, of Pennsylvania. I will venture to say that in all the districts of Pennsylvania you will find that when the boys get to be 9 and 10 years old, if they have any aspirations for education, it is considered necessary to send them to boarding schools, and in that case you have the expense of traveling and all the other incidental expenses, which you do not have in these consolidated schools.

Suppose you do increase the expense? I see a good many old men here and I will ask you, How did we use to farm? Why don't we farm that way now?

Just one more word I want to say. The majority of our children go to the cities to the boarding schools at a tender age, when they need parental care, and to my own knowledge many of them come home neither ornamental nor useful. In these consolidated schools they can be educated at less expense, and they will be more healthy, physically and morally. I know in my own district I can call to mind several of us who have paid out enough to educate our children, over and above what

it would cost us in the consolidated schools, to have built the schoolhouse and still save money. We consider all the items of cost in other things, and now, in the name of common sense, let us consider them also in this.

Tait Butler, of North Carolina, presented the following paper:

INSTITUTE LECTURERS.

Reference to the published proceedings of this association reveals the fact that at every annual meeting three or more members have discussed the question of institute workers. Moreover, even before your programme committee assigned the discussion of this subject to me it was the most troublesome one with which I have had to deal as an institute director. Afterwards of course it became doubly so, and then when I read the discussions in the published proceedings of your previous meetings, and came to realize how thoroughly the field had been covered, my difficulties in relation to this important question became thrice magnified and increased. In short, after thinking a great deal about this subject, as all institute directors must, and then reading the thoughts of others expressed at previous meetings of this association, I could not but feel deeply the force of the trite phrase, "There is nothing new under the sun;" at least I am very certain there is nothing new in what I have to offer in this paper. But even an old question, though worn threadbare by past discussions, which is of such vital interest to the permanent success of farmers' institute work, and which has not yet been solved, is worthy of further consideration. Mark you, I emphasize the statements that (1) this is the most important question confronting those engaged in directing farmers' institute work, and (2) it is yet unsolved. In fact, I do not think we have yet made much progress in its solution. The partial solution indicated by the optimistic reports of directors in certain States and provinces seem to me at best, when taken at their full face value, as merely a short and unsatisfactory truce with a difficulty which certainly yet remains to be met and overcome before the institute work can be said to be on anything like a sound and satisfactory basis.

Methods, as they relate to organization, advertising, the manner of conducting institutes, etc., have been of great importance and much progress has been made toward the solution of the problems involved, but all are secondary to the necessity for supplying suitable institute lecturers. A lack of interest in the institutes on the part of farmers is sometimes complained of; but really the wonder is not that the farmers have taken little interest, but that they have taken as much interest as they have, when we consider the sort of material that has sometimes been given them by would-be institute lecturers. It seems to me we have been too much concerned with the work of getting out a large attendance to devote sufficient attention to the more important matter of furnishing those who did come out with the right sort of information in an acceptable form. By far is it better to have twenty-five farmers carry away from an institute something of real value to them and to have them favorably impressed with the knowledge and practical good sense of all the lecturers than to have two hundred go away with a lack of respect for the judgment of the lecturers, no matter how thoroughly they may have been entertained by music, declamations, and other side-show attractions.

The purpose of this discussion is, no doubt, to aid, if possible, in solving the difficulty of supplying an adequate number of the right sort of institute lecturers. The question naturally arises, therefore, What is the right sort of institute lecturer? The diversity of opinion regarding this question is great and the standard is by no means well defined. Not infrequently institute directors and institute audiences express the idea that the so-called scientific men are not wanted, but that the demand is for real, practical farmers for institute lecturers. Personally I do not care where the institute lecturer comes from, and I do not believe institute audiences do either. At least, if they do to any great extent, I believe institute directors are largely responsible for the fact. The demands of institute audiences are in a measure the result of education—they are largely what we have made them. At first the institute lecturers were largely drawn from among college and station men, and now the tendency is to the other extreme—to the so-called practical farmer. This is unfortunate, for if either class was to have been employed exclusively or to a highly preponderating extent the order should have been reversed. The farmer should have preceded instead of followed the college and station men. But the most serious mistake was in trying to do a large part of the institute work with college and station workers. To supply the demand it became necessary to employ all the college and station force when not more than one out of ten college or station or any other class of men is a suitable institute lecturer, and the other nine never should have been taken for institute work. Because a man is a great scientist or a careful and skilled investigator is no

reason for supposing he is a good teacher. In fact, some of the best and some of the poorest institute lecturers I have ever known have been college and station men. Not one in fifty of the best farmers makes a good institute lecturer; then why should we expect all college and station men to be a success at institute work? The simple fact is that institute directors have been very unwise in the choice of institute lecturers, and they have recently been paying the penalty. The question is not how the man has obtained his information, but has he the right sort of information and does he present it in an acceptable manner? It is a man, a teacher, that is wanted; and if the lecturer gives the right sort of stuff in the right way he will interest and instruct and win the confidence and respect of his audience, and when he does that he is a successful institute lecturer. We hear much about the practical and the scientific man, as if the practical man could not be scientific nor the scientific man practical, when in reality good science is good in practice and good practice is good science, or, in other words, if a proposition is not practical it is not scientific. Let us be done with this nonsense; a fact is always fact; the difference is in the man; therefore, since it is the man we want, let us apply common-sense business principles in his selection.

It will perhaps be to little purpose for me to attempt a detailed description of my ideal of an institute lecturer, but before we can intelligently lay plans for securing or educating suitable lecturers we must arrive at a more uniform and definite understanding of what is most desirable.

The institute lecturer must, first of all, be an educator. The day of the agitator should have passed long ago. It is education, not agitation, that is demanded. The information given must be specific and definite; generalities are no longer of value in institute work. The institute lecturer must be accurate in the sense of correctly stating the consensus of the best opinion, but he need not regard minute accuracy as so important that he is afraid to make a definite and decided statement. It may be permissible that he be not always minutely accurate from the standpoint of the scientist, but he must always be safe from the standpoint of the farmer.

At this point please pardon me while I digress to the extent of saying that one common fault of the college and station workers as institute lecturers is that because of their custom of being accurate they confuse with too many exceptions and qualifications. For example, it is better by far to state that 30 per cent of the fertilizer value of a cowpea crop is left in the roots and stubble than to say from 25 to 33½ per cent, although the latter statement would be more nearly correct from a scientific standpoint. On the other hand, the chief fault I have to find with the so-called practical farmer as an institute lecturer is that he insists on giving only his own results and opinions instead of a definite statement of the average results of the best authorities, interpreted by his own experience or observation. No man's experience is sufficiently varied and extensive to make it a safe guide for the teacher, and this is especially so if, as is usually the case with this class of lecturers, his experience is interpreted by guessing, instead of by measuring and weighing. The experience of no man is sufficiently broad nor his judgment so accurate that he can afford to disregard the work of others if he is to be a safe teacher. The teacher must even avail himself of the aggregate knowledge pertaining to his subject. This the so-called practical farmer frequently can not or will not do in his institute lectures.

The institute lecturer must also be a pleasing and interesting speaker—that is, he must have a terse, incisive, forcible, and attractive way of presenting his facts. To instruct his hearers he must first interest them, but to my mind the man who must resort to funny stories and anecdote to interest an institute audience is to just that extent short of an ideal institute lecturer. Of course, illustrations by word, object, chart, and blackboard are of the greatest value, because they add to the force and accuracy of the impressions conveyed, but the tricks of the stump speaker lower the force and dignity of an institute lecture.

Since the most important part of an institute is the questions and discussions, the lecturer should be quick to correctly see and interpret the force and import of a question. Many an otherwise good institute worker fails simply because he is unable or unwilling to look at a question from the view point of the one who asks it, and consequently his answers are irrelevant and unsatisfactory. If an answer is attempted it should be direct, crisp, and polite.

Not infrequently have I heard institute directors say they wanted at least one man in each institute party who could answer all reasonable questions. Deliver us from this sort of man, I say, in or out of institute work. I want my men to be able to answer all reasonable questions in their particular lines (or to be honest enough to say they do not know), but the field of agricultural knowledge is too large for any human mind to cover accurately. You know this and so do the intelligent farmers

and they consequently lose faith, just as you do, in the accuracy of any man who presumes to cover the whole field of agriculture.

The institute lecturer should be old enough to make it plain that he may have had an opportunity to do the things about which he talks. He should most assuredly have done the things about which he talks—had actual experience and observation, but, as before stated, I would not have him confine himself to this as a source of information; he would be too narrow. While it is true that any man can do good to those working in the same line, by telling them just how he made a success of any particular phase of farming, this is not enough. We must go farther than this; the institute lecturer must be a teacher in the broadest sense if he is to establish the farmers' institute as a permanent educational institution.

Now, in conclusion, how are we to obtain such institute lecturers in sufficient numbers? They are not born, but will have to be made. A few good ones may educate themselves, but enough will not. A plan must be devised whereby the suitable raw material can be converted into trained teachers.

In time the graduates of our agricultural colleges may partially supply the demand, but in many States the number of educated young men returning from the colleges to the farms is not sufficient to supply the demand for institute lecturers even ten or fifteen years hence, for not one in fifty, even of such men, will ever make suitable institute lecturers.

Is a special school connected with our experiment-station farms the only solution of the problem? I can see no other, but this solution is not an easy one. Can the institute, with our present resources, be made of sufficient value to command the money necessary to secure the services of the class of men able to develop the possibilities of this educational work? More money must be had. Even \$20,000 annually spent by New York is but a portion of what is necessary to properly carry on the work in a State like North Carolina. We have been too modest in our demands. We must awaken to an appreciation of the full value and possibilities of this work and demand the money to prosecute it on a scale commensurate with its importance.

Of one thing I am most thoroughly convinced, and that is that the solution of this question of securing a sufficient number of suitable institute lecturers is the one great problem before this association and the friends of the farmers' institute work in America—the problem beside which all others are utterly insignificant.

If such normal schools, or, as I prefer to call them, training farms, are to be established, great care must be exercised in laying the plans on which they are to be conducted on correct lines, and, in my opinion, in order to meet the requirements of varying local conditions these schools will have to be more numerous than suggested by Mr. Hamilton in his able address on this subject. On one point especially should caution be great—the teachers on these farms or in these schools must be good institute lecturers as well as learned scientists. Let us not put the blind to leading the blind, as has been too frequently done in the selection of institute lecturers.

Finally, let me again say, with all the emphasis of which I am capable, that we must take a more comprehensive view of the importance of this institute work and make our demands for money commensurate therewith; and the chief reason for this is the necessity for supplying a sufficient number of efficient institute lecturers.

The following paper on the same subject by L. A. Clinton, of Connecticut, was read by title:

A successful farmers' institute depends not upon the number of people who are present, but upon the interest and attention given to the subjects under discussion. No matter how important the subjects are or what vital interest they may have to the audience, unless presented in an acceptable manner the meeting falls flat. The influence of some lecturers upon a farmers' institute is very similar to that of a wet blanket upon a fire. Just why this is so it is difficult to state, but a few general reasons can be given.

The lecturer who must confine himself to his paper does not meet with a full measure of success. While we believe that it is a good plan to have the lecture written out, yet we do not believe it a wise practice to be confined to the paper in presenting the subject. The audience prefers to have the speaker talk rather than to have him look at his paper and read what he has written.

The first element of success in an institute speaker is that he have something to say, and the second element of success is that he know how to say it. The first quality mentioned can not be acquired by studying station bulletins or literature upon the subject, but it must be acquired by actually having performed the operations discussed. The one who depends upon a prepared lecture upon stock feeding

or potato growing, or any other subject, will fall far short of the full measure of success as an institute lecturer. In order to qualify as a lecturer on stock feeding, one must have actually had years of experience in handling and feeding stock. The most important part of a lecture is usually brought out in the discussion which follows the presentation of the subject. In this discussion the lecturer is at a wonderful disadvantage who has not been through the subject and learned his matter at first hand. Without doubt the pamphlets which have been printed by the Farmers' Institute Specialist of the Office of Experiment Stations will prove wonderfully helpful in institute work, yet the lecturer who depends upon them alone for his information will not prove a great success. These bulletins should be regarded as helps, and while the suggestions contained therein may prove of value, yet the subject must be presented in one's own way and the material must have been secured in a large part from other sources than books and bulletins.

In the matter of presentation it should be remembered by the lecturer that the first quality of a good speaker is to make the audience hear every word spoken. The speaker must believe first of all in the truth of what he is saying if he is to impress this truth upon his hearers.

Another quality which is of leading importance in the institute speaker is brevity. The speaker who attempts to cover the whole subject and to say the last word which is to be said upon the subject is a weariness to the flesh. From twenty minutes to one-half hour for opening the discussion is enough for almost any subject. If the audience is interested, the discussion will be continued through the asking of questions, and the audience will have an opportunity to take part in the discussion. If the audience is not interested, the quicker the subject is dropped the better. Many institute lecturers who otherwise would be rated as successful have a weakness for talking too much.

One type of lecturer which the institute manager should pray to be delivered from is the funny man. We do not object to an occasional story to lighten up an address, but where a studied effort is made to tell funny stories and the audience is kept in a roar from the beginning to the end of the lecture, the success of the institute as a school of instruction in agriculture is greatly impaired. If the funny man must appear on the programme, keep him until the last number of the evening session. We do not question the popularity of this man with the audience. He will be called for repeatedly. He will receive the most hearty cheers, and he will be given the credit of being the greatest man on the programme, but yet the farmers' institute should be for real solid business and should not be turned into a school of farce.

The energies of the farmers' institute manager in the future will be taxed to secure men with the requisite training and experience to qualify them as farmers' institute lecturers. A few of the men who graduate from our agricultural colleges may eventually be available for this work. There are few, however, who are qualified at the time they leave college. Several years must be spent in actually meeting and overcoming the difficulties in the various lines of farm work before they will be qualified to discuss intelligently the various subjects relating to agriculture.

The institute manager must be a judge of men. He must select his man not simply because of what he hears with reference to him. He should visit him at his home and should observe how his fields and flocks are cared for, and whether or not he is putting into practice the best principles. The institute lecturer who recommends one thing from the platform and who does not put into practice on his own farm what he recommends to others is an injury to the cause. Farmers are no longer taking for granted all that an institute lecturer tells them, but every year more investigations are being carried out, and the farmers are looking up the class of teachers employed in institute work. The institute lecturer must be grounded not only in the art of performing the various operations, but he must thoroughly understand the principles which underlie the art. A mere statement of how things should be done without a discussion of why one method is preferable to another is no longer acceptable. Practical agriculture and scientific agriculture now go hand in hand. There is no separating the two, for practical agriculture in order to be practical must be based upon scientific principles.

The man who has made a success in some special line of work can often be used to advantage as an institute lecturer. He may require a little polishing. It may be necessary for him to do a little reading and studying to learn what others have done in the same line and to familiarize himself with the principles which underlie his work. Then, if he possesses that quality which enables him to stand on his feet and tell in a straightforward manner what he has done, the word of such a man carries conviction.

The farmers' institute must become more and more a school of instruction, and the institute lecturer should be looked upon as one whose first duty is not to furnish

entertainment but instruction. To meet with the greatest success he must in the fullest degree possess the qualities of a good teacher, a thorough knowledge of his subject, enthusiasm for his work, and the ability to speak in a clear and convincing manner.

The following paper was presented by F. H. Hall, of Illinois:

COOPERATION WITH OTHER EDUCATIONAL AGENCIES—THE COMMON SCHOOLS.

The agricultural renaissance in America had its beginning in the experiment stations. The primary function of the station is investigation—discovery. Through its bulletins it undertakes the work of dissemination. In the performance of this latter function it is handicapped. It speaks the language of science, and to the common people this is an unknown tongue. The investigator speaks to the few who can understand him, who follow him, though sometimes afar off. But they are genuine disciples and they have faith in varying degrees in their leader.

The farmers' institute attempts to organize these disciples and to send them out among the people to preach the gospel of a better agriculture. The first work of the institute is conversion. It holds up to the people some helpful, recently discovered, practical, scientific, agricultural truth. The people look upon it at first hesitatingly and perhaps suspiciously. New evidence is presented. Appeal is made to the economic instincts of the listeners, and at length some are converted—turned around—turned together with their faces toward the leaders in investigation. They begin to have faith, not in Hicks, but in the Weather Bureau; not in tradition that has to do with the moon, the planets, the number 13, and the ground hog, but in the men who weigh and measure and compare, and generalize only when sufficient data have been obtained.

The work of the institute is not so much instruction as it is inspiration. Its purpose is not so much to teach as it is to create the desire to learn. At best the number of scientific facts that can be taught in the annual institute are not a thousandth part of what the neophyte needs to learn. Two or three days of instruction per year to less than 2 per cent of the farmers in a county can not of itself have a value commensurate with its cost. The product of the number of facts learned in the best two-day county institute in North America multiplied by the number of learners in attendance is insignificant compared with the number of facts to be learned multiplied by the number that ought to learn them. If the rank and file of the farmers wait for the institute to teach them what they ought to know, all will die in comparative ignorance. The true measure of the value of an institute, then, is not so much the amount of teaching done as the degree of interest aroused. To be sure, there must be teaching, but its main purpose must be (1) to create the desire to learn, and (2) to point to the sources of information.

For the purpose of arousing interest, one interesting newly discovered fact of unquestioned economic value, so presented as to challenge attention and convince the listener of its importance, is worth a hundred commonplace truths, even though the latter may be essential and presented in a most attractive manner.

The institute speaker must give results, with just enough of the processes by which the results are secured to awaken interest and to establish confidence. Underlying principles, theories, and technical terms are essential, but the institute has done the most important part of its work when it has created the desire to become familiar with these and has pointed out the way.

But what is the way? What are the agencies that may, in part at least, satisfy the want which it is the business of the institute to create? I answer, the press, the bulletins, short courses in the agricultural colleges, and farmers' clubs for possibly the present generation of farmers; the common schools, boys' clubs, and the agricultural schools and colleges for the next generation.

I repeat, the institute at its best can do only the most insignificant amount of teaching. What it does do should be well done, and should be scientifically accurate. It should be the little morsel of knowledge that gives the thirst for more knowledge. It should be, for the most part, related to some bulletin, some book, some school, some college, where a hundred times as much as can be given in the institute may be obtained.

The institute is more a sentiment maker than it is a school. By the presentation of a few economic facts, it turns the attention of the people to the experiment station and the agricultural college, and makes generous appropriation for these great educational institutions possible.

But the agricultural college must have students, as well as money for equipment and instruction. President Roosevelt says that nearly one-half of the people in this

country devote their energies to producing things from the soil. Then, I say that nearly one-half the men in college should be in the agricultural colleges. Heretofore the rural schools have been articulated with the high schools, and the high schools, in turn, with the so-called college of literature and the liberal arts. But in the State universities there are many colleges—seven in the University of Illinois. It is time that the rural schools should seek articulation with the colleges of the economic arts, particularly with the colleges of agriculture.

For a student to attempt to reach this college through the high school as it is now conducted is almost to make sure of missing it. The high school leads to the so-called learned professions. The college of literature and arts determines the high school curriculum and extends a welcome hand to its students.

It is one function of the farmers' institute to assist in finding what Superintendent Bayliss happily calls "the trail from the rural school to the college of agriculture." It must not only find existing trails, but it must help to make new ones and stimulate young people to enter upon them. It must create a sentiment in favor of teaching the elements of agricultural science in all the schools, in favor of rural school consolidation, rural high schools, agricultural high schools (or a modification of the present high school), with curricula suggested by the agricultural college and including a department of domestic science. G. Stanley Hall says that the germs and extracts of as many trades as possible must be introduced into the common schools. It is the business of the farmers' institute to see to it that the "germs and extracts" of that vocation to which nearly one-half the people of North America devote their energies are introduced into the public schools.

In no way can this be so rapidly accomplished as by the cooperation of farmers' institute officers with school officers and teachers. The combined farmers and teachers' institute is the most effective agency for bringing about this educational reform. The farmers must take the initiative in this cooperative undertaking. When the officers of the schools are made to feel that the farmers desire their assistance and cooperation the combination is easily consummated. Teachers, particularly those who know a little of agriculture, who are in touch with the Department of Agriculture and the experiment station, should be given a place on the programme. Broad-minded county superintendents of schools, in States which provide for such an officer, make first-class secretaries of farmers' institutes.

The teachers of the rural schools should be brought face to face with the leaders of the men who pay the taxes that support the schools, and these teachers should be permitted to ask the taxpayers, "What will you have us attempt in the way of agricultural instruction and training? Will you support us and give us the necessary assistance in doing the work you desire? Will you really encourage us in our attempts to obtain the information we need from the Department of Agriculture, from the agricultural college and the experiment station?"

Let the leaders in the farmers' institutes answer these last questions with an emphatic affirmative, and the work is well begun, and when thus begun is half done.

Two years ago there were whole counties of teachers in the State of Illinois no one of whom had ever seen the nodules on the roots of clover; no one of whom knew what they were for, or had ever heard of them. The words protein, carbohydrates, phosphoric acid, hygroscopic, balanced ration, etc., were not in their vocabulary. But this is not true to-day, thanks to the work of men from our college and station in the combined farmers and teachers' institutes and to the cooperation of our county superintendents of schools in this great work of agricultural instruction.

Last winter it was my privilege to address many audiences at county farmers' institutes composed of more than 50 per cent of the teachers of the county and less than 2 per cent of the farmers. There will be many such meetings during the current institute season. Last Friday evening 1,500 people, including 200 teachers and a less number of farmers, assembled in the opera house in Centralia, Ill., to listen to a discussion of the relation of the school work to the life work. It was one session of the Marion County Farmers' Institute, which was attended during the day as well as the evening by the county superintendent of schools and nearly every teacher in the county.

Last Tuesday the court-house at Mount Carmel, Ill., was filled with an audience made up of teachers, some of their older pupils, and a few of the leading farmers. At one of the sessions the county superintendent of schools presided, and steps were taken to organize a boys' experiment club and to interest the teachers in the bulletins from the Department of Agriculture and in the work of the experiment station at Urbana.

In one institute attended by the speaker last week there were 60 farmers and 1 teacher. The farmers were attentive, asked many questions, and took some part in the discussions. On the whole, it was a profitable institute, but for every farmer in

attendance there were at least 99 at home. Had the schools been dismissed for the day, as they were in Marion County, and the 100 teachers from the county, accompanied by their older pupils, attended this meeting, scarce a farmer in the county but would have heard something of the institute, the experiment station, and the agricultural college. Moreover, every ambitious teacher present would have carried something of value back to her school and to her pupils, and the dissemination product would at least have been multiplied by ten.

The common schools are one of the educational agencies that we can ill afford to neglect. It is through these that we may most quickly and effectively lay mains to the great reservoir of agricultural knowledge, of which Professor Hamilton has sometimes spoken. It is through such effort as this that we may promote the cause of education for useful activity. It is well to help the graybeards; it is necessary to help the children, too. About the best thing, almost the only thing, the institute can do for the farmers of to-day is to get them on the right side in this educational discussion. For the sake of the next generation, more even than for their own sake, their approval of the experiment station, the college of agriculture, and the teaching of agriculture in the common schools is necessary.

In a few instances we are met with the assertion that such procedure is narrowing in its effects. There are yet a few who oppose what they term "early specialization" in the educative process. They plead for what they are pleased to call "a liberal education" as a foundation for the economic and special education; but what is a liberal education? I answer, it is the education that makes a man free, that emancipates him not only from the bondage of ignorance, but from the bondage of dependence upon other people for his bread and butter, from a parasitic livelihood; that gives him the power to earn his own living—really earn it—by doing something that needs to be done, and thereby contribute something to the general uplift of the race.

What is a liberal education? Let the head of Columbia University tell you what it is not. He says: "The designation 'liberal' has come to be claimed as the sole prerogative of a very narrow and technical course of study that was invented for a very narrow and technical purpose and that has been very imperfectly liberalized in the intervening centuries."

That education is the best; the most liberal in the best sense of the term, for your boy or for mine, that will make him worth the most to the world, able to contribute in the largest possible degree (for him) to human well-being.

It is as certain as the law of gravitation that he who has the most to give, and gives it, gets the most out of life. It is through one's vocation that he makes the greater part of his contribution to human good. Hence, the thoughts of boys should be early turned toward some honorable occupation. "Blessed is the boy," says Jenkin Lloyd Jones, "who comes early to a life purpose, who knows what he wants to do."

The superintendent of the Boston schools has recently said that one purpose of manual training in the schools is to help the boy to be fortunate in the choice of his occupation. This is one purpose of agriculture in the public schools. It is best that nearly one-half of the boys in the schools, probably more than half of those in the rural schools, should select agriculture as a life vocation, and having selected it, should be given the widest possible opportunity to fit themselves for this honorable employment.

The farmers' institute, by seeking the cooperation of teachers and school officers, can become an important factor in giving character to the new education, the aim of which is not "culture for culture's sake," not "art for art's sake," not philosophic leisure, but success through useful activity, through large contribution to human needs, through personal effort in doing a share of the world's work. "Let him who would be greatest among you be your servant." "Happiness through work," says Baker, "is the new creed of the dawning century."

G. A. Putnam, of Ontario, Canada, presented the following paper on the same subject:

The previous speaker has dealt with this subject in a very broad and scholarly manner, and what few remarks I have to offer will be of a practical nature, indicating what we are doing to keep our agricultural educational forces in close touch with each other. The relation of the institutes to the press and the schools will be dealt with in other papers and in discussion.

Cooperation itself is one of the most important questions, not only in its relation to agriculture but to the great manufacturing and producing establishments of the United States and Canada. It is cooperation that has done so much for the agriculture of Denmark and some of the other European and Australasian countries, and it occurs

to me that it is to cooperation—cooperation in its true sense, each working with the other for the benefit of all, and not “making the other fellow work,” or what has occasionally been the result in our country, “working the other fellow”—that we must look on this side of the Atlantic for progress in the agriculture of the future.

However, it is not of cooperation in its application to the various agricultural pursuits of the country that I am to speak, but of the cooperation of the institute system with other educational agencies. I must admit that the thought which came to me when this subject first received my attention was that it would first be necessary to decide whether you could have a farmers' institute separate from other educational agencies, or whether the institute is not in its nature the very essence of a blending and sifting of scientific investigation, of experimental work, and practical experience—the very life of an institute consists in the educational agencies which go to make it up. If we take these away we have not even the skeleton of a successful institute.

It devolves upon me, therefore, in speaking to this subject, to tell of the various educational agencies which combine to perfect the work of the institute, and in doing this you will excuse a frequent reference to my own country and its institutions. It is probably unnecessary, however, for me to ask your indulgence in this respect, for the history of institutes in any one State or Province is very similar to that in other States and Provinces. We have, sir, in our Province a number of educational agencies which have combined to make, through the medium of the farmers' institutes, agricultural education what we find it in Ontario to-day. And some of these agencies can well be used to still further advance the interest of the agriculturists. Allow me to briefly state what has been and is being done.

(1) The institute system must be in close touch with the agricultural college and experiment stations of the State or Province. There are at least three ways in which this relationship can be established and maintained.

(a) The staff of the college and station were first used as institute lecturers. In fact this is the only source from which institute lecturers were obtained in the early history of the institutes of the Province of Ontario; and I am safe in stating that our agricultural college would not to-day have grown to nearly its present proportions or have attained its present degree of efficiency had not the professors and heads of the various departments engaged in institute work some twenty years ago. On the other hand the institutes would not have attained their present position in the Province had not these men been competent, sympathetic, and hard working. Many an ex-student of the agricultural college when asked what first drew his attention to the college will reply that the lecture delivered by some member of the college staff at an institute meeting first opened to him the benefits and pleasures of a course at the provincial institution. It was these lecturers who first brought the college prominently before the people and resulted in an increased attendance of students who were deeply interested in agriculture because they know what it meant to be practical agriculturists, and not because they had a fancy that they would like to be farmers.

(b) As the years progressed the professors at the college found it impossible to attend all the meetings that were asked for, so a number of farmers who had become prominent because of their success in agricultural pursuits were enlisted in the work, and at present the majority of the institute staff consists of those men who have made a success in one or more lines of practical agriculture. These institute lecturers keep in close touch with the college and experiment station, not only by reading the literature sent out from time to time, and by coming in personal contact with the professors and those in charge of the teaching and experimental work, but by occasional visits to the college in order that they may see for themselves what is being done in the different departments. The assistance given the institute lecturers by the professors is very much appreciated, and the benefit is mutual.

(c) Another source of strength and benefit to the institute members throughout the Province is the literature sent out from the college through the Provincial department of agriculture. The institute members (over 22,000) receive these bulletins and the annual report and depend upon them for direction in the selection of grain, methods of cultivation, classes and types of stock to raise, etc.

(2) The institutes must be in close touch with all organizations formed for the purpose of furthering some line of agriculture. We have the different live-stock associations (cattle, sheep, swine, horse breeders, etc.), the Fruit Growers' Association, Dairymen's Association, Bee Keepers' Association, Poultry Keepers' Association, etc. It would be impossible for me to even briefly mention the work which is being done by these different organizations and how their work is being brought to the public notice and extended through the medium of the farmers' institutes. Allow me to give two instances which will serve to indicate how these different organizations are utilized by the institutes and how the institutes are used to further the interests of the separate organizations.

(a) *Dairymen's associations.*—The dairymen's associations, of which we have two, are composed of persons interested in this line of agriculture from all sections of the country. They appoint their board of directors, who are prominent in their own localities, and this board of directors plans certain work for the year, such as the holding of district meetings for the benefit of producers of milk and makers and proprietors of factories and creameries. They also hold an annual convention, to which prominent dairymen are invited and specialists in various lines give addresses. You will ask, "What has this to do with farmers' institutes?" In making arrangements for the district meetings just mentioned the institute officers and representatives of the dairymen's associations are asked to cooperate in planning for and holding the meetings. The officers of the Fruit Growers' Association cooperate with the institute officers in holding special meetings in fruit districts. In those districts where prominence is not given to any particular line of agriculture the institute officers give special prominence to the two or three lines which are of most interest. In this way we are able, through the cooperation of the institute officers and those of the various associations, to plan our work so that all classes may receive benefit. This is a feature of the work which has not been brought to the degree of efficiency which we hope to see in the near future.

(b) *Agricultural societies.*—Then, again, we have agricultural societies established in every county of the Dominion, some counties holding from one to eight exhibitions in the fall of the year. These societies are independent of the institutes so far as organization is concerned, but in many of the more progressive counties the institutes utilize the societies and the societies the institutes. This is true cooperation—each doing what he can to further the interests of the other for the benefit of all. As an example: In one county we have four township agricultural societies. At the annual meeting of the farmers' institute an effort is made to elect the secretary and president of each agricultural society as a director of the institute. When the fall fairs are held the institute usually arranges to take charge of some educational feature in connection therewith, such as the holding of a live-stock judging competition, an exhibition of grains, grasses, weeds, etc. Then, again, if the institute wishes to hold a seed fair in the spring of the year, or a judging class sometime during the winter, at one of the points where an agricultural society is established, they are strengthened by the cooperation of the president and secretary of the local society.

(c) *The winter fair.*—One of the prominent features in educational and live-stock lines is the winter fairs, held at Guelph and Ottawa. At these fairs valuable prizes are offered for nearly all classes of live stock, and advantage is taken of the large exhibits of first-class types of the different breeds and classes to utilize them for illustrating lectures and addresses by men who are prominent in the raising, feeding, curing, marketing, etc., of these products. The meeting of institute lecturers at the winter fair corresponds somewhat with the "round-up" which is held in many of your States.

The aim of the department is to so arrange the field educational work that the institute officers will be composed of representatives from all societies which have members in the district. Then each of these phases of agriculture will receive its due proportion of attention at the regular meetings, and the members of the various societies will have an opportunity of lending their assistance to the institute officers to further the special meeting in which they are interested.

We are of opinion that the educational work in each district should be undertaken through the institutes, while the experimental work done in different sections of the Province should be undertaken by the various societies. The institutes should keep in close touch with this work (the work of the societies) and be prepared to distribute information by lectures and literature where they will be of benefit.

W. C. LATTA, of Indiana. When the institute work began in Indiana it was at a time when certain farmers and organizations had been springing up, and the question now arose, "Is this some secret organization you are developing?" and I soon found that the people were looking upon it with suspicious eyes and questioning about it; and it was borne in upon me then, at the very outset, that this work must be one of cooperation. We have not made the progress that we ought to have made in our State, but we have made some. Along one line we are attempting cooperation, namely, with the schoolmen. Friends, I am no longer sanguine of doing very much good in giving instructions to adult people. Our definite objective point is the boy and girl in the schools, and so we want to interest the schoolmen in the work and bring them together. At the last two annual conferences—the one held last October and the one held this last month—we brought the schoolmen there.

We had Mr. Kern, of Illinois, who is a power in that line, and we had our own superintendent of public instruction, and we had a county superintendent in our State who has been doing a great work in getting the boys interested in corn growing. This subject is so wide and comprehensive that the workers are necessarily separated when working each in his own line, and there is danger of a feeling of isolation, so that there is need of bringing the workers together. We hope to accomplish much on that line.

This subject is one that must receive increasing attention, and we must get in closer touch with the teachers of these rural schools if we are going to accomplish the greatest good in the future.

Thereupon, at 10.20 o'clock p. m., the association adjourned until November 11, 1905, at 8.30 o'clock a. m.

MORNING SESSION, SATURDAY, NOVEMBER 11, 1905.

The association met at 8.30 o'clock a. m., the vice-president, E. A. Burnett, in the chair.

John Hamilton, Washington, D. C., Farmers' Institute Specialist, presented the following paper:

MOVABLE SCHOOLS OF AGRICULTURE.

The farmer's institute, as at present organized, has its limitations. In some of the States in which the institutes have been longest in operation there are already evidences of their having about reached this limitation, and unless their work is broadened to meet the advancing needs of farming people in the science of agriculture they will eventually cease to be an important factor in rural education.

INSTITUTE ORGANIZATION.

The farmers' institute of to-day in its organization and methods is essentially the same as it was fifteen or twenty years ago. It consists in meetings of farmers, called for the purpose of giving and receiving information in agriculture. The meetings usually continue from one to three days with a tendency toward the one-day institute. The instruction is given by lectures followed by questions and answers. At a two-day institute it is not unusual for the programme to include from ten to fifteen separate topics presented by from three to as many as ten or twelve speakers.

In these respects the institute is practically unchanged. Such improvements as have been made have been in the way of arranging for meetings and appointing speakers often months in advance of the institute season, and in the discarding of sensational exhibitions and incapable men as lecturers and substituting for them those who are experts and authorities upon the subjects that they present. In these respects there has been great advance.

ADVANCE IN RURAL INTELLIGENCE.

In the past twenty years country people have not been standing still. The instruction that the institutes have given and the improvement in agricultural journals, which circulate more widely and are read more intelligently and generally than ever before; the distribution of bulletins of information by the agricultural experiment stations and the State and National departments of agriculture, together with the work of the agricultural colleges in educating young men and women and sending them out in increasing numbers to follow agriculture as a profession, have all had a wonderful effect in increasing the intelligence of country people in agricultural affairs, making it more difficult each year to provide instruction of a kind that will satisfy their intellectual and practical needs.

SPECIFIC INSTRUCTION NEEDED.

The more progressive farmers are not now desirous for variety in subjects so much as for more exact and specific instruction, teaching that will show precisely how an operation is conducted and how the science of it may be applied in ordinary practice and under the average conditions by which farmers are surrounded.

Right here is where the present system seems to fail. The small amount of time devoted to any topic is such as to make it impossible for the teacher to do much more than introduce it. The field of agricultural information has been enlarged to such an extent that no man in an hour, a day, or a week can at all exhaust one of its more important subjects. Indeed, in the schools it is now found to be necessary to take several weeks of careful study and drill to become acquainted with such a subject as butter making, or cheese making, or fruit growing, or market gardening. More time to a topic is the need.

The farmer now wants to know all that has been discovered about a subject, and he wants the information systematized so that he can use it in his business. He has discovered that a little agricultural learning is dangerous in that it is often an expensive thing. He has learned that half knowledge is apt to mislead and injure rather than direct to profitable results. More extended and specific instruction is the need of agriculture, and if the institute is to continue serviceable it must provide it.

SMALL CLASSES.

The study of special subjects for any considerable length of time must necessarily be confined to small classes. Large and promiscuous audiences can not be expected to devote two or three weeks to the consideration of any topic, neither are all interested alike in any one subject. Dairymen are not specially interested in fruit culture, nor the fruit grower in dairying. This necessitates the formation of classes composed of persons interested in certain specialties—interested to the extent of being willing to devote sufficient time to the study of a subject to become fairly well acquainted with its most important scientific and practical features.

MOVABLE SCHOOLS.

To meet the new conditions and needs, the movable school of agriculture has been devised. Such schools have, in foreign countries, largely taken the place of the old-time farmers' institute. The method is for the State director or superintendent of institutes to arrange for the formation, in various districts or centers, of classes numbering not less than eight nor more than fifteen persons who agree to attend upon a course of lectures upon a single topic and to participate in such practice work as the course prescribes. The teaching force consists of one or at most of two instructors who are experts in the subject they present.

If the subject be cheese making, for instance, the course would begin with the study of the character and composition of milk and continue in logical order to the completed product, the students participating in the various operations, so as to be able upon the completion of the course to do the things that they have been taught.

The equipment of apparatus for giving instruction would be provided by the State directors, and the hall, with its heating, lighting, and janitor service, together with water for cleansing utensils and fuel for heating milk, etc., to be furnished free of charge by the class, together with the milk necessary for demonstration and practical purposes, the product to be the property of the donors.

By this method schools on a great variety of farm topics could be organized, limited in number and variety only by the money which the State director has at his disposal.

EDUCATE SPECIALISTS.

Through this instrumentality it would be possible to educate in one or more specialties ten or twelve persons in each community who would be well fitted for conducting special lines of work and become eventually experts and sources of information and aid to others.

The expense of such a school would be the salary and traveling expenses of a competent instructor and the cost of the equipment of apparatus and material necessary for demonstration and practical work.

The teaching would not exceed an hour a day for the lecture, and one and a half to two hours for practical or laboratory work. The instructor in the intervening time would be expected to visit some member of the class each day at his home, and give such special assistance and advice as would enable the pupil to utilize his home equipment to the best advantage for pursuing the line of work that the school was organized to aid.

COURSES OF STUDY.

In order that the State directors and institute instructors may have a guide in undertaking this new feature of their work, the Office of Experiment Stations of the

Department of Agriculture has undertaken to prepare and publish for distribution courses of study upon cheese making, butter making, poultry rearing, and fruit growing, with lists of references to authorities, items of apparatus needed, and detailed outlines of practical work.

The introduction of such a set of courses in a State as supplemental to the present method of institute work will round out the institute system, provide for its indefinite extension, and furnish employment to skilled teachers through the entire year.

O. C. GREGG, of Minnesota. In the first place, I like the thought. Again, I agree with what my friend from Illinois said last night, that the institute as now organized is a place in which we excite interest and enthusiasm. I have come down to that in my institute work in Minnesota, and I find that it is a successful thing. On the other hand, I fully appreciate the fact that we can not make the institute a school, in giving details. That is why we put \$5,000 out of \$18,000 into an Annual. Get people thoroughly aroused and they will read the book. But the book is not a live teacher.

You can not hold a large crowd on one topic. We have a man talk a short time on each subject. We are going to make in every county a central point where we can have these things, and if my vote counts for anything, Minnesota is going to start that.

ANDREW ELLIOTT, of Ontario. I am happy to find that Mr. Hamilton thinks the time has arrived for movable schools. This is a movement in exactly the right line. It is true enough that we can not dispense with the old system of farmers' institute work for the young people growing up, but we must go a little bit farther ahead, and we must no longer be content with telling people how to do a thing; but we must also tell them why it has to be done, and then we have them on a thinking basis, and it is the lack of thought that is the greatest drawback we meet in the agricultural community.

The CHAIRMAN. Ontario has had a movable school in a little different form—a dairy school. How long did they stay in one place?

G. A. PUTNAM, of Ontario. We have not had what you might call movable schools in Ontario, but we have had the traveling dairy. That was started some fifteen years ago. The method in that was for an advance agent, as I might call him, to travel from place to place throughout the dairy section, and consult with prominent dairymen in the different districts, and arrange with them for a suitable place in which a dairy meeting could be held. This advance agent made provision for the supply of cream and a suitable place for the churning demonstration to be held, and in many places a lecture was given in the meeting in addition to the demonstration. I had almost forgotten about this, it is so many years ago. But this same thing is now being carried on in the Province of Nova Scotia. Miss Rose, one of our workers, in the winter months, spent some time in Nova Scotia, and she has had most successful meetings. She held a series of meetings, with four sessions, two sessions each day, for two days in a place, this summer, with an average attendance of 64 at the meetings.

Four or five of the lady delegates who went from Province to Province attending institute meetings during the past summer mentioned to me that they never came across poorer samples of butter than in the hotels where they were. We attribute the success of our butter makers in Ontario to the work of these schools I have mentioned.

O. C. GREGG. This matter of the traveling dairy was introduced into our institute work through Professor Carlisle, who is now in Colorado, and the commission men said that right there began the revolution in butter making in Minnesota.

G. C. CREELMAN, of Ontario. It seems to me this is pretty well summed up. You may call it a movable school, or call it bringing the live stock out to the meetings; you may call it getting a special car and running through the country; you can call it putting a churn on a wagon and going from point to point giving demonstrations of dairying, or whatever you please; but the fact remains that the people at the

present time living on the farms learn to do things, not by reading or listening to talks, but by seeing them done, and then doing them themselves. In the early days, when the institutes started, anybody was employed that could be gotten hold of, anybody that could talk well, theoretically or about practical things. That condition has passed away. Then came the man with the charts, and, as Mr. Kydd says, he pointed to the different parts of the horse, and said this and that ought to be thus and so. That phase of instruction passed away, and now we have the horse himself used in demonstrations. Now we have come to the point where we have to demonstrate things practically. As I say, you can call this work anything you please. But the time has come when we have to quit this pioneer work that has been done and get things in shape at the meetings to demonstrate the work.

F. H. Rankin, of Illinois, presented the following paper:

BOYS' AND GIRLS' INSTITUTES.

Every department of human endeavor is pulsating with progressive activity. There is a smaller sphere for the uneducated man of every decade and a diminishing possibility of success for the man who does not read and think. The reading man is in the saddle; the thinking man is guiding the nation's destinies.

At no period of history has the intellectual thought of the agricultural classes been stirred as it is to-day, and therefore we see springing up on every side these agencies which are at work to stir the farmer out of his intellectual apathy. The farmers' institute has won for itself a leading place among the several educational influences that are working for the benefit of the farmer. It stands in close touch with the people of the agricultural colleges and experiment stations on the one hand, and seeks to bring the farmer to a better acquaintance with them on the other. In short, the spirit which it imparts to this work is to make agriculture not only the support of man's body, but also an inspiration to his intellect. The key to improving agriculture in any place in the world is its intellectualization.

The farmers' institute work is an effective agency for disseminating knowledge of use to agriculture which scientific men are discovering, and it gives the opportunity for the dissemination and exchange of ideas among the farmers themselves for information in regard to their occupation. The farmers' institute is a distributing agent; this is its mission. The most successful and acceptable men upon the lecture force are those persons who have themselves had the experience and know the value of the truths that they teach. The information which they bring, to be of service to those to whom it is given, must have been tested and used and applied until its value and practical character have been clearly shown. No common or ill-equipped instructor should have a place in this work. The speaker at the institute should be a man who knows at least one thing well and can vouch for its truth; who has seen it tested and is willing to stake his reputation upon the accuracy and reliability of the statement which he presents. I believe that every institute superintendent will bear me out in the statement that the greatest difficulty which confronts him is to find a sufficient number of men of the character described with which to provide material for the institute lecture force.

At meetings of this character we hear a great deal about the selection of speakers for institute work. But there is another question beyond that. After we have gotten the speakers how shall they be trained and developed?

It seems to me that our agricultural colleges are not yet working up to their limit, so to speak, along this line. There is yet a work which but few of them have ever attempted. I do not believe that our colleges will do their full duty toward institute work until they have provided some special training for the young men enrolled in their schools to fit them for this institute work. I do not refer simply to the training of them in agriculture and the varied sciences connected therewith. I mean giving them something of the practical teachers' training, so that they can take the knowledge they have and stand up before their fellow-men and present it in a clear, attractive, and convincing manner.

There is something along this line in which our agricultural training needs a little more developing in the way of assisting these young men in qualifying themselves not simply as speakers at meetings, but as teachers and leaders in our institute work. In the speaker's opinion this should not be left to the somewhat uncertain help or assistance obtained at the literary society or debating club.

Recognizing the importance of this work, the Illinois College of Agriculture, two years ago, introduced a regular course of study which is termed "farmers' institute management." This course is the study of the farmers' institute as a factor of our

public education. It is designed to set forth the principles applied to the organization and conduct of farmers' institutes and agricultural associations; to systematize into definite lines the knowledge acquired by the students in the college to the end that they may render more distinctive service, upon their return home, in the institute work of their counties and State; and also to inspire within them the desire to become active members of some of the agricultural associations of the State. Lectures, assigned readings, parliamentary practice, the making out and advertising of institute programmes, etc., are leading features of this course. More than 50 young men have taken the work each year.

It is not our aim in this course to pound a lot of knowledge into a boy which may or may not be of any practical use to him afterwards, but rather to fill him with a boundless enthusiasm and set before him high ideals, intellectual and moral, and thus equipped the young farmer takes his place among other citizens as a public-spirited man.

The speaker takes the stand that the very best representative men should be found upon the farms of our country; but so long as they neglect to secure broad, liberal education, just so long must they be relegated to a back seat. The training which a boy gets—if of the right kind—during his school days, followed by active participation in farmers' institutes and kindred associations, will give him the equipment necessary to use these opportunities to the very best advantage. It will encourage and develop the gift of public speaking, and the ability to preside at any public gathering with ease and dignity. These gifts must be used by some one in every community, and happy is that man called upon to play his part who has during his younger days prepared himself to do so with ease to himself and satisfaction to his neighbors.

The course in farmers' institute management offered at the College of Agriculture of the University of Illinois affords the very best opportunity possible to cultivate these gifts and gives the young man definiteness of purpose. A decided mind is a tower of strength in any man's life, and in a general way stands for success. To know the right course, and to be sure that you know it, gives steadiness and accuracy of work.

While, so far, I may not have adhered very closely to the topic assigned me, viz, "Boys' and girls' institutes," let me hook to it the other end first and consider institutes for girls and boys.

The ideal or perfect institute must have good learners as well as good teachers. It must develop and strengthen the idea of self-help. This idea of self-help has been prominent in Illinois farmers' institutes from the first. Our local men must and do work up the local institute. Whenever you get a local man interested and enthused to act and work, there follows the death of "his institute" or "your institute," but there rules instead the broader conception of its being "our institute," and all feel that they are not only welcome but a part of it and responsible for its success.

Much depends upon the parents of the young people. The most difficult institute to arouse interest and enthusiasm in is the one composed wholly of old, gray-haired men, numbering many "retired" farmers. Do not misunderstand me as being disrespectful to these older members of the farming community. They are all right and needed in the institute, but they should not be there to the exclusion of the boys and girls. There is something radically wrong with the institute management which needs reconstruction if there are no young people in attendance. In every community there are boys and girls who can both entertain and instruct an audience. Urge them to take up and discuss some question of common interest to the locality. Secure a young lady, or several of them, to favor the audience with a piece of music at opportune times. These young people who consent to take part in the meeting themselves will generally bring a number of young people from their neighborhood to the institute. Short recitations, requiring but a few minutes' delivery, from a boy or girl will not only please and stimulate the young people, but will often win the parents who might otherwise not be in attendance. They will feel a pardonable pride in knowing that their son or daughter will speak at the institute. And, again, any well-organized institute could add to its usefulness by offering "awards" or "honors" for special proficiency in farming. It is but little trouble to secure premiums among the farmers themselves or the business men of the town in which the institute is to be held. And supplementary to the prizes, honorable mention could be made for excellence of work; classification could be made as to the best-kept farm; the best arrangement of farm buildings; the best acre of corn or potatoes or other crops; the best garden; the best-kept house yard or grounds about the house; the best yield of eggs; the best butter. Also premiums may be given on culinary products, corn, etc. I am of the opinion that a decided influence would thereby be given to the institute and consequently to agricultural progress. Plans can be made ahead for these features and inexpensive tokens of merit may be awarded at the institute session at

which the report of the successful competitor should be made. These are some of the helpful features for creating a more active interest in the institute.

Many of the counties of Illinois have organized what are termed boys' experimental clubs and girls' home-culture clubs. To illustrate: Winnebago County has a farmer boys' experimental club with more than 500 members, and a girls' home-culture club with more than 300 members. The boys there are growing a high-bred variety of corn, and also sugar beets for a beet-sugar factory. This year 112 boys planted corn from seed furnished by the officers of the Winnebago County Farmers' Institute. Some 75 members of the club volunteered to grow sugar beets. Over 50 acres were planted by these boys. This work is in cooperation with the Winnebago County Farmers' Institute, the officers of which offered the following prizes to the boys in last year's corn contest, all premiums being cash: First prize, \$15; second prize, \$10; third prize, \$5; fourth prize, \$3; next ten prizes (each), \$1.50; next ten prizes (each), \$1.

All other boys making exhibits would receive cash premiums at the discretion of the corn committee. The boys who take first, second, and third premiums are expected to write an article, to be presented at the institute, telling of the preparation of the seed bed, planting, cultivation, and harvesting of their prize corn. Let me remark in passing that it is a hopeful sign for the farmers themselves to believe enough in their own boys to contribute cash for prizes without asking the merchants of the town to donate collar buttons, link cuff buttons, suspenders, stock food, etc., to encourage the farmer boys to be better farmers.

The following are a few of the prizes offered to the girls of the home-culture club: For sewing, patching, darning, prizes in each of these: First prize, \$1; second prize, 50 cents.

Six prizes were offered for the work of girls of 12 years of age and younger and six for that of girls 18 years of age and younger. The following classes were made:

First and second prizes for handkerchiefs made by hand; first and second prizes for best setting in of patch in piece of plaid goods. First and second prizes for best darned hole in dress goods or table linen not less than 1 inch in diameter. Prizes were also offered the girls in bread-making contests. This is to cite briefly from Winnebago County, which is only one of the many counties which are taking up the same line of work.

However, they have gone a step further than this. It sometimes develops that the boys were there more for the premiums than anything else, and, after a year or two, while the boys bring in better corn both as regards quality and selection, they sometimes pattern after older exhibitors and bring in corn which they did not raise and get help from others in the selection of the same; and thus the exhibit degenerates into too much of a scramble after premiums; for the boys and girls often made an exhibit when they had nothing to do with the growing or selection of the corn.

This year the Illinois Farmers' Institute has inaugurated a new kind of a contest known as the "corn-judging contest," one in which the boys would get the benefit of the contest themselves. Mr. A. P. Grout, treasurer of the Illinois Farmers' Institute, last year offered as a premium to pay the expenses of the winner of this contest while taking two weeks' instruction in corn judging at the college of agriculture. A competent corn judge and instructor were provided. The first day of the meeting the boys were given careful instruction in corn judging, and they handled the corn, measured, and scored it. This school was conducted both forenoon and afternoon. The next day the boys were examined in corn judging. Nineteen boys competed and did good work. And, by the way, this instruction was worth just as much to the older people back in the audience as to the boys. The parents of the winner of the prize in the first contest wrote a letter to Mr. Grout thanking him and saying that "their boy was so much pleased that he now wishes to take a full course, thinking it the only course for the coming farmer boy."

Several counties are planning to introduce this corn-judging contest into their institutes this year. One county is offering premiums of this kind to boys of each township in the county—as many premiums as townships. Who can measure the educative results of sending a boy from each township in a county to the agricultural college for two weeks? It means the facing of so many boys, perhaps for all their lives, toward scientific agriculture. It means the telling of the story of their trip and the instruction received in detail to their parents and schoolmates. It means the interesting of scores of other boys and their fathers in the practical training in agricultural lines and the marvelous achievements of the college of agriculture and experiment station. Every step in such a contest is an education to the boy, whether he wins the large prize or not, for one of the conditions is that the contestants must attend the day sessions of the institute.

The boys and girls go into these contests with vim and enthusiasm, and who will gainsay that these experimental clubs as fostered by the State farmers' institute and

the agricultural college are valuable accessories of the farmers' institute work? We believe that the true effort which this work creates will make these boys better men. These boys want to be made wiser to-day than they were yesterday, and I have a lively faith that observation and reflection, thought and study, are just as essential in the great business of farming and farmers' institute work as in any other pursuit. The purpose of an institute which does not have in mind the striving for higher ideals in youth needs reconstruction.

There are many ways of getting the boys and girls interested in an institute besides those indicated, such as getting the boys and girls together during the recess period and having a little class in corn judging, or explaining some of the commercial products of the corn plant or the root development of the clover plant or soy bean, a sample of which is easily carried in a sealed can. Encourage some of the boys to bring some live stock to the place of meeting and have an expert there, some person from the agricultural college or a competent stockman. Conduct a class in stock judging. Pigs, sheep, cows, horses, etc., should be taken as object lessons, and the good points and defective points indicated. In conducting a class, or exhibit in judging, the reasons should be given, explanations made, and questions answered on all points thus considered. Questions relative to the most desirable types and good qualities of animals can thus be more intelligently answered with the specimens actually before the young people.

Following such a session, while interest is keen and their entire attention is given, is the time to ask a few questions and drop a few suggestions as regards the agricultural college. Make suggestions along the following lines: Why not have the best herd of improved stock? Why not increase the fertility of your land and command your neighbors' respect by having the neatest and tidiest kept farm? Suggest that experience is a dear school; that they are soon to face the problem of self-support. Ask them if they understand how to correct the defects in the soil; to reduce the ravages of insects and plant and animal diseases; how to get rid of undesirable tendencies in flock and herd. If they wish to learn the secret of a larger success in these and other lines, there is no better place to spend a short time than at the college of agriculture and experiment station where many up-to-date ideas come from. Point out in detail the courses the agricultural college offers to students which are designed to fit them for the business of farming and at the same time to furnish a means of culture. The latch string hangs out, and such an education is within the reach of every boy, provided he wants it and makes up his mind to that end. In this way the mind of the young people can be led up to the most important feature of the institute work. I want to drop this word in passing: There is no interest I know of that is at all comparable with live stock as a means of interesting and educating and entertaining the young people. You all know how it is when you go and buy a pure-bred mare, cow, hog, sheep, how the boys will immediately become interested. They are comparing the animal with that of their neighbors, or the kind they had before, and as the progeny comes along they are anxious to see it and examine it and decide upon its qualities. They are held; they are interested; there is nothing like it on the farm.

After all, the greatest live stock, the most valuable live stock, are the people—the boys and girls who live on the farm and for whom these institutes are really conducted, for the older ones are "set" in their ways and must ere long pass from the active stage of life. After all, what makes the land worth anything is the people who live upon it. This land of ours was not worth anything until there was some kind of people on it—not worth anything. But when we have a great farming population of intelligent men and women; now that it is well stocked with people, America is the greatest country in the world. After all, it is the people who make it.

Ladies and gentlemen, if we were privileged to return to our childhood days would we not, with the knowledge which the years have brought, give a more certain trend to the acts of that period? Yet in this institute work there comes the opportunity to place yourself beside this latter-day child, the farm boy, and make yourself, as it were, a child with him and lead him to that higher plane of which true manhood is the summit.

In brief, the farmers' institute conducted for boys and girls will develop in these young people manhood and womanhood, will broaden their views, enable them to separate the good from the bad, develop in them an inquiring mind, and tend to show them the real privileges of true citizenship.

These potent influences are factors in directing the lines of the lives of these young people, which are as true as the needle to the pole, and will help the farm boy to become a modest, thoughtful, studious, public-spirited man, well fitted to pursue his chosen calling and, if circumstances demand it, to grace the halls of any legislature.

While the institute worker may be building for a permanent as well as for a profit-

able agriculture, remember there is yet another class of results which perchance are not always in your plans, the history record of which can not be written; it is that unconscious, unrecorded, unintentioned influence which in a good man's life often aggregates more in the end than purposed acts.

A refreshing enthusiasm, assiduous energy, optimistic leadership, exquisite urbanity, and personal loyalty to right principles are assets which may be accumulated and which may make a life an exemplification of Doctor Johnson's motto: "'Tis better to live rich than to die rich."

W. L. Amoss, of Maryland, presented the following paper:

COOPERATION WITH THE NATIONAL DEPARTMENT OF AGRICULTURE.

From the farm, the farmers' club, the farmers' convention secretary I came to be a farmers' institute director to administer a bill which had been drafted by a club of farmers, which read: "The purpose of these institutes shall be to bring before the farmers of the State such information as will effectively remedy many of the existing evils now prevalent in every department of agriculture as now pursued in Maryland."

As secretary to the farmers' convention, the first duty assigned me was to find a man who could tell our road commissioners and our farmers how he had built a permanent road. This was eighteen years ago.

Nine years after in the institute work I found that my department could only grow through the use of men from the farm—what you understand to be practical men. When I called upon the experiment station, the man who did the best and most approved work brought information how he had grown products on "his" farm, and at the experiment stations I was fortunate in my search for practical men in having an acquaintance that introduced me to George T. Powell, of Ghent, N. Y., a practical man, a student, and one in close touch with the work of his experiment stations. Through him I met another practical man, Edward Van Alstyne, of Kinderhook, N. Y., also a student of agricultural literature. These men, and others of their type, with the good sound advice gotten at the meetings of this association, have built up a patronage to my department of which I am proud.

Soon after I began drawing on that excellent force of workers of Mr. Dawley's they began their annual meetings at their experiment stations. This was close on to ten years ago. There has been a great change in what the stations had and what the stations have, in both men and facts. The best institute workers come before the audiences to tell how they have succeeded and how the experiment station has succeeded in doing work. As I see the trail of progress for us, as institute directors, it is to take out to our farmers what the experiment stations have done through men who themselves are doing what they have gleaned from the bulletins of our experiment stations.

There is a place on our programme for the specialist—I am not at war with him.

Now we come to what the National Department of Agriculture can do to help the farmers' institutes. This great Department is the greatest of all experiment stations. What we have done for the State experiment stations we can do for the Department of Agriculture. What the experiment station has done for the institute the Department can do for the institute, and do it in the same way. Its methods of helping will be subject to change and improvement as have the methods of the experiment stations. The experiment stations found that their literature was not read, that the wastebasket was the file used in many instances in many farmers' homes for the bulletins. To-day the literature of the Department is not on file in the farmers' homes as it should be. Every division of our great Department has gathered and stored away a vast amount of information that needs to go out to the farmers, as we, as institute workers, have taken to the farmers of our respective States the information gleaned from the literature of our experiment stations, excepting, perhaps, it would only be necessary to bring it to the institute director and help his department disseminate the information.

It would be necessary for the institute specialist to have a few men whose work would be to carry this information. As to methods and equipment, I need only to say they should be the same as are now used by our State experiment stations. The Department should train institute workers sent to it on the approval of State directors. A short course should be organized. The Secretary said that he had found it necessary to train his men, that the colleges were not turning them out. Now, we need to have men trained, and I believe the Department of Agriculture can best do this for us. At the same time they can be the carriers of information from the Department to the State institute departments.

The Department of Agriculture can be to the State department of institutes what the State experiment stations have been, and the same methods can be used by it as are now used by the stations, and I believe the Department will be equally benefited by the helping as it has been to the State department experiment stations.

WOMEN'S INSTITUTES.

MISS R. BLANCHE MADDOCK, of Ontario. We have met this year, as we have done for a number of years past, for the purpose of learning all we could from your organization, in order that we may be better fitted for our own work through our States and Provinces. I believe, however, that the time has come when we should have at least a committee of women to work in connection with the Association of Farmers' Institute Workers, so that we may have either separate sessions or may meet with the association. You may possibly hold your association sessions so far away that it would be impracticable for us to attend them, but we ought at least to keep in touch with the workers from Canada and the United States, so that we may in the future form some plans for definite work, for the improvement of the work both here and there. Owing to the change of the place of meeting having been decided upon at so late a date this year it has been impossible to accomplish anything. It is believed, however, that your work will be helpful to the work intrusted to us as women. The commercial value of your work is not to be estimated. But there is another thought to be considered, and that is that in this country millions of foreigners are crowding to our shores, from all the countries of the Old World, asking for protection and a home. We welcome them, of course, and we hope that in time they will become good American and Canadian citizens; but we also recognize the element of danger there is in this mixing of classes and creeds. Will the result not depend largely in the future on the stamina of the young people whom these strangers meet—the character of the people whom they meet on this side of the water? This is the thought that I should like to present—that you have the commercial side of it, but as women, as mothers and sisters and daughters, we are trying to do our part in making the young citizens so strong and noble that as they come in contact with these farmers it can not help but tell in the unifying of the country and its peoples. It is all very well, of course, to talk about live stock and cultivation, and all the other subjects that are necessary, but there is a thought behind it all, and that is, I believe, that the result will largely depend on the kind of homes we have, and the social and intellectual life that we have in those homes.

I ask the cooperation and sympathy in this work of the State superintendents who are present. It is impossible to send lady delegates to these different association meetings without money, without assistance, and I would ask that this coming year the superintendents should see that some provision is made for sending lady delegates, so that we will have a strong representation next year, so that we may hold sessions with you, or separate sessions, where we may be able to present our work.

INSTITUTE ORGANIZATION AND METHODS.

L. R. TAFT, of Michigan. In our work in Michigan, and I am sure it is so with you, we find that we still have unsolved the question of the best method of institute organization and the best methods of work. I will not, however, attempt to outline to you what my ideas regarding these things are, because after listening to the reports of the various States as to the various conditions under which you work, I am convinced that no one method would answer for all; but this morning I wish merely to refer you to a paper prepared by Professor Hamilton, in which he gives us a scheme for the organization of our institutes in the different States. (See p. 78.)

This scheme he has prepared is very complete, and, in fact, if I were in any way to criticise it, it is because it is rather too complex for the average State; but I believe it will be very useful to us. It is full of good suggestions, and I think we ought to print this in full in the report of this meeting and have it for reference in

the future. He has taken the methods in use in the different States for the past year or two, and has deduced from them what he believes to be the best method of institute organization. He gives not only the constitution for the State, township, and district societies, but it also gives a law that might be enacted in establishing an institute district. I would say that to a very large extent the ideas would meet with my approval, and they would work, I think, in most of the States.

Professor Hamilton advocates first a central supervision, and combines with that the local organizations for the county, township, and district, and he recommends work along these lines to secure stability and perpetuity of the work. You can see the importance of the organization for this purpose. The whole scheme is prepared with the idea of securing the cooperation of the agricultural colleges and experiment stations, and I know that in States where they have quite close connection between the colleges and institute work it gives them good results. He recommends making this a State institution, in order, in the first place, to have appropriations from the State, and to provide for development of the institute system. This scheme as prepared here gives us the outline for a system, and he provides for a central board of control with a director as executive officer; and this governing board, as he recommends, will consist, first, of the president of the board of regents of the university or agricultural college—whatever your board is of—and next the dean of the agricultural college or the president of the agricultural college, the director of experiment stations, the superintendent of public instruction, and also four delegates selected from the county institute society. These directors of institutes would serve without pay, but would have their expenses from the State.

He further provides for the payment of \$100, or of a sum to be fixed, of course, from the county treasury, to pay the local expenses of the institutes—increasing, of course, in proportion to the funds.

The secretary of the State board of directors would serve for three years. It also provides for the printing and sending out of the reports of the institutes. As arranged in this scheme, the board of directors would fix the dates for the meetings, review the programmes, and arrange for the speakers. It would also provide for institutes for women, for traveling libraries and reading clubs, and would defray the expenses, except the local expenses. It arranges for an appropriation by the State. The scheme goes on to provide a constitution and by-laws, as I said, for the county, township, and the district, for such societies.

I have thus very briefly outlined what the system is.

It seems to me that it is very desirable that we have something in the way of county organizations, and that we should have in all States a State organization for carrying on the work. Whether we should attempt to modify our present systems and have the board of directors of the States selected according to this plan, or whether we should keep up our present methods, would perhaps be a problem for each to solve for himself. In our own State, although we do not have a State board of directors, it follows along about the same lines as set forth in this plan. Our board of agriculture in Michigan is really the board of trustees of the agricultural college, and the president of the college is a member of that board; so that we follow very closely this plan except that we do not provide for the four delegates from the county institute societies.

It seems to me in many respects this is an admirable idea to bring the institutes closer to the farmers, and to make them feel even more than we can now that these are farmers' institutes. Without taking further time I want to recommend this report as a part of the proceedings of this meeting.

E. E. Kaufman, of North Dakota, presented the following paper on the same subject:

Every State institute director has the problem of methods and organization to deal with, and we find nearly as many different plans followed as we have States.

I suppose nearly every director believes his State has the most nearly ideal system, and really how many of us are in a position to say he has not until we have made a thorough study of his conditions and environments?

What a grand, good plan it would be if a uniform system could be devised and put into effective operation throughout all the States.

Such a system would undoubtedly contain a township organization, a county institute, and a governing board for the State. With such a system working harmoniously and a legislature inclined to be liberal with appropriation the superintendent would have the smoothest kind of sailing.

In some States, I am inclined to think, such a plan could be inaugurated and carried out very successfully. To my mind the conditions for such a system would be found in the older States, where the farms are nearly uniform in size, the country well settled, and the people all, or nearly all, of one nationality.

Opposed to this method of organization is what is generally called the one-man system, although rather incorrectly, I think. By this plan the institute work is generally under the management of a board which secures a superintendent who plans and carries on the work without any organized local societies or clubs. Under such a system is my own State working, and while it must be admitted there are some drawbacks, yet I am inclined to think it is the better plan for the present at least.

With a large alien population of at least six different nationalities more or less suspicious of one another, bonanza farms, and farm houses often miles apart, conditions are none the best to attempt ideal methods until institute work is well on its feet and firmly established. Indeed, I am not sure but what, under the aforesaid conditions, the so-called one-man system would more nearly approach the ideal method of organization.

The greatest objection that can be brought against that method is that of creating sufficient interest locally to make a successful institute. If the superintendent is the right man in the right place he will be able to select a local committee which will give the matters of advertising and arrangement as much time and attention and just as good results will be accomplished as when performed by the officers of a local society.

Where a local society is in existence, the president feels that it is one of his prerogatives to preside during the institute, and resents the action of the conductor in taking charge of and conducting the meeting. To be entirely successful at all times I believe the institute should be conducted by an experienced man. True, that can be provided for in the by-laws of the society, but it will often be the case that the president will desire to exercise his prerogative, and rather than have any trouble the conductor will step aside and waive his right.

For the best results the governing board should not be too large. Five, I believe, is sufficient and seven at the most. Where it is necessary to travel long distances a large board is expensive and at the best unwieldy.

In an organization where the county societies would send delegates to the annual meeting it would cost in North Dakota from \$1,200 to \$1,500 to pay the expenses of delegates and board members for a year. The question naturally arises, Could not this amount be spent to better advantage in holding a larger number of meetings?

With all due respect to those who favor the township, county, and State organization scheme, I must say that in my opinion such a system would not bring the best results in North Dakota, for the present at least.

With larger appropriations, a larger experience, and a better knowledge on the part of the farmers in the aims and objects of institute work and less rivalry between the different nationalities, conditions will change, and I am not prophet enough to state what would then be the best plan.

In conclusion, I want to state that I am not antagonistic to any system which will bring about the desired results, and that in our work the farmers are urged to organize local clubs and societies. A few such have been formed, some of which have weathered the storm and some have fallen by the wayside.

Results are the thing desired, and the system that will bring results under prevailing conditions is the one to follow.

The paper by John Hamilton referred to by Professor Taft is as follows:

FORM OF ORGANIZATION FOR FARMERS' INSTITUTES.

The early or formative stage of every great movement is usually a period of comparative confusion. Whether it be the development of a science or of a political reform, there is always a time when information is meager, views are more or less

vague and conflicting, and methods are correspondingly crude. As information is gathered and better methods are discovered a common understanding is reached, and at length a well-constructed system or organization is effected.

Until quite recently the farmers' institute movement has been passing through its formative period. The institutes were begun by the several States independently of each other, with very little or no experience to guide those in control, and with no central authority or general bureau of information to aid in coordinating their work. The natural consequence has been that wide differences exist in the laws, forms of organization, and methods of management of the institutes in the several States.

Some of the States have laws that are quite elaborate. They prescribe in detail the methods to be followed in conducting the institutes, the number of meetings that shall be held, and the amount of money that may be expended each year. In others they are extremely simple, merely recognizing the institute as a factor in education, and leaving the details of its organization and work to the individual or board intrusted with its management. A considerable number of the States and Territories have no institute legislation whatever. In these the work is dependent upon services contributed by public-spirited citizens and by members of the faculties of the State agricultural colleges and staffs of the agricultural experiment stations.

A comparison of the institute statistics as given by the several State directors shows wide differences in the number of sessions held, in the attendance, in the amount of money appropriated, the character of the programmes, the number of speakers employed, the cost per session, and in many other important respects. To what extent the differences in the results obtained are due to the varying degrees of efficiency of the methods pursued can only be surmised, but that the methods adopted have affected the work in greater or less degree is undoubted. The fact that one State, with the same or even less expenditure of money, is able to secure more satisfactory results than another is evidence that the one that excels possesses special advantages, or has adopted a more efficient system of administration than the other.

PURPOSE OF THE INSTITUTE.

All earnest farmers' institute workers have the same purpose in view—the improvement of country conditions through the dissemination of valuable information relating to agriculture. The differences that exist in their methods of carrying out this purpose are not as a rule the result of a deliberate intention to be peculiar, but have arisen, as has been stated, out of the conditions that existed when the institutes were organized. The methods, however, in any State are not so fixed in its system as to be incapable of change, or of others being substituted if such change and substitution are found to be best.

The time seems to have come when those who are responsible for the development of the institute work of the country should in some systematic way consider the important questions that the differences in the various methods in use suggest, with a view to improving existing systems by incorporating in all of them such items of recognized value as are likely to be equally advantageous and applicable in all of the States. This no doubt can best be done by first coming to some agreement respecting a few fundamental principles in institute work that ought to be recognized and adopted by every State.

With this in mind, the Farmers' Institute Specialist of the Office of Experiment Stations, United States Department of Agriculture, has been securing data from the farmers' institute workers in all of the States and in foreign countries respecting the various methods that are in use in conducting this work, and after careful consideration and comparison of those that have been most successful with those that seemed to have at least partially failed, has outlined the system that is herewith presented.

While it is not expected, neither is it desirable, that the institute systems of the several States shall ever become uniform in every particular, any more than that the constitutions and laws of the States should become identical in form, yet there are certain fundamental features that appear to be essential which should be incorporated in every institute system that is to secure highest efficiency in its administration and most complete success in accomplishing its educational purposes.

ESSENTIALS OF AN EFFICIENT INSTITUTE SYSTEM.

A brief preliminary discussion of several points held to be essential in any well-constructed farmers' institute system is given in partial explanation of their incorporation into the body of the plan proposed. A full discussion of the items introduced into the plan is for obvious reasons impracticable and is doubtless unnecessary. Most of them are believed to be sufficiently self-evident to need no explanation.

PERPETUITY.

In discussing the essential features of the farmers' institute work and of a system that will secure the ends desired, there arises, first of all, the question of stability.

The friends of this movement believe that the institute provides for a need in industrial education that no other institution has yet met, and that it has come to stay. If this is true, then some form of organization that will secure permanency has become a necessity.

It can be stated as a general truth that no institution that is dependent for its continuance or efficiency upon the life or ability of any one man is well founded. Sooner or later such an administration must close its term and a new man or set of men must take control. When this occurs there is almost certain to be a considerable period when the progress of the work is seriously interrupted, and not infrequently the entire system and policy which had been adopted and successfully conducted for years are completely overthrown.

On the other hand, where institutions are so organized and established that all of the important features of their administration are securely fixed by law, removals from position and changes of administration can do no serious harm. The constituted order is preserved and the work goes steadily on decade after decade, accumulating valuable experience and transmitting its methods and its powers unimpaired for the benefit of future generations.

The institute has become a part of our system of industrial education, and its organization, therefore, should be such as will insure its permanent, continued existence. There is but one way to secure this, and that is to have it become a legal body with its powers and duties clearly defined and firmly fixed by law.

LOCAL ORGANIZATIONS.

The second necessary feature to be provided in order that the institutes may be permanent and progressive is that of efficient local organization.

No enterprise requiring the cooperation of the citizen to carry it into effect can long endure unless the individual whose cooperation is required is given a share in the responsibility. There is an interest, vigor, and efficiency created and promoted in placing responsibility upon men that are never developed where they are pauperized by being maintained without exertion of their own. Remove from the township or county the element of personal responsibility for their government and control, and in a short time the majority of the citizens will have lost interest in public affairs and will tamely accept whatever those who rule from distant capitals impose. A strong local organization, recognized by the law, with defined duties and responsibilities, is essential for the perpetuity of the institute, as well as for the best performance of that which it has been created to effect. These local organizations should not be limited to a single society for a county, but should extend to the subdivisions of counties, so as to reach and include the practical farmer and his family by being made easily accessible to every farm home. The average farmer will not, week after week or month after month, travel 10, 15, or 20 miles to attend a meeting of agricultural people, but will be glad to be a member of a local club or society that includes his neighbor if it proves itself useful and is within easy reach.

CENTRAL SUPERVISION.

A third element in an institute system that is to secure perpetuity and efficiency to the work is central supervision.

An institution without a head is weak. There must be a competent central organization power to coordinate and direct or the enterprise will fail. This is so generally recognized and accepted both in governmental and business affairs as to need no demonstration.

In the farmers' institute work a central office is specially necessary. The institute work is so distributed that cooperation between its parts is scarcely possible unless there be some central supervising power to act as a common medium of communication. The interests which the institutes represent are of such magnitude and importance as to require the undivided attention of at least one capable director in each State to properly oversee. To place their control in the hands of a man already overburdened with other responsibilities is in all cases to hinder, and in many to practically destroy, the efficiency of the work. If the duties connected with the supervision of a college with but a few hundred students at most, or of a district school with but a score or two of pupils, require the entire time of the president or of the teacher in charge to properly oversee and conduct, surely a school of agriculture,

such as the farmers' institute comprises, with pupils by the ten thousand, needing instruction of the most advanced and technical character, should have the entire attention of at least one man to plan for it and to organize its work.

AGRICULTURAL COLLEGE AND EXPERIMENT STATION COOPERATION.

The fourth essential in any State farmers' institute system is provision for securing the cooperation and assistance of the agricultural college and experiment station.

The institute is an educational institution holding a peculiar place in the system of public instruction. Its distinctive work is to disseminate agricultural information. In this respect it is the field agent of the agricultural college and experiment station. These institutions represent advanced agriculture, and are at the head of the movement for education in agriculture in each State. Their efforts and influence extend into every community, to the workers in the shops and on the farms; in the orchards, vineyards, and stock barns of the people. Their work and that of the institutes are identical in these respects, and the closest union and cooperation should therefore exist between them.

THE INSTITUTE A STATE INSTITUTION.

In order that the institute may be most useful to all of the people and continue to develop most rapidly, it should be as free as possible from political and sectarian strife. To effect this its officers should be elected by men of all political parties and of all religious creeds, and the law fixing its organization should be such as to make such an election possible.

While it should be as free as possible from political control, it at the same time should be so identified with the State administration as to make its financial needs a part of the budget presented to the legislature for meeting the expenses of the several departments of the State government, and its accounts should be subject to audit by State officials. It should in this respect be in a position similar to that now occupied by the State system of public instruction, and while receiving maintenance from the State be under nonpartisan control.

PROPER SUPPORT.

No organization of a public character can long exist and properly progress without some provision for adequate and assured support.

The farmers' institute system that is to serve the purpose of its organization must employ expert specialists to teach, and must have efficient officers to oversee the work. Proper provision for the payment of these lecturers and officers must be made, and this provision should not be of a temporary or uncertain character, but the act providing for the creation of the institute system should also provide for its maintenance and an appropriation should be embodied in the law which will insure continuous and adequate support.

FUTURE DEVELOPMENT.

The institutes are in their primary stage of development. Hitherto they have been, for the most part, mere demonstrations or examples of what is possible in the way of teaching scientific truth to farmers. They have not yet settled down to the giving of regular and systematic instruction. This undoubtedly will come as experience is gained and the means for extending the work are provided.

The future institutes no doubt will, as is now done by a number of European countries, employ lecturers by the year, to be in the field giving regular instruction in itinerant and local schools and in clubs of farmers. This will necessitate changes in present methods that need to be anticipated and provided for in any form of organization that is to be serviceable through the years to come.

OUTLINE OF A SYSTEM.

The legislative act for the establishing of a State system of farmers' institutes and the forms of constitutions and by-laws for State, county, township, and district organization herewith presented have been proposed not with the expectation that either the act or any of the forms will be adopted without modification, but mainly to call attention to a possible system that might be adopted by States where no permanent organization has yet been effected or in which it is still incomplete, and to

provide a basis for the discussion of the question of organization in institute work and of the form that will best serve to accomplish the objects which the institute has been created to secure.

Although the system suggested is not in operation in all of its details in any single State, nevertheless every feature has been tested by actual experience and has been successfully applied by institute workers.

The form of organization proposed provides in general for—

- (1) A central board of control for the State, acting through an executive officer or State director.
- (2) An organization in each county acting through a secretary who is an agricultural expert.
- (3) Township organizations subordinate to the county institute society and acting through their several secretaries.
- (4) School district clubs composed of families organized by the county and township societies, and holding their meetings at each other's homes.
- (5) For nonpartisan control, and for continuous and adequate support.

FORM OF AN ACT OF ASSEMBLY FOR THE CREATION OF A SYSTEM OF FARMERS' INSTITUTES.

AN ACT Providing for the establishing of a system of farmers' institutes for the State and making appropriations for their support.

SECTION 1. *Be it enacted, etc.*, That a board of administration of farmers' institutes is hereby established to be known under the name and style of the ——— State Board of Farmers' Institute Directors.

SEC. 2. Its purposes shall be to organize farmers' institutes in the several counties; to furnish lecturers who shall give instruction in the institutes; to disseminate useful agricultural information, and to aid in developing the agricultural resources of the State.

SEC. 3. The State board of farmers' institute directors shall consist of the president of the board of regents or other governing board of the State agricultural college; the director of the State experiment station; the dean of the faculty of the school of agriculture in the State agricultural college; the president of the State board of agriculture, or in case no such or similar body exists in the State, then by the president of the oldest incorporated State agricultural organization; the State secretary or commissioner of agriculture, and the State superintendent of public instruction, members ex officio, and of four persons to serve for one year, elected by delegates from county farmers' institute societies, all of whom shall serve without pay, except that their actual and necessary traveling and hotel expenses incurred in attending the annual convention, and the meetings of the board shall be paid by the treasurer of the State upon presentation of properly certified itemized vouchers approved by the secretary of the said board. The seven named ex officio members of the board of directors shall be empowered immediately upon the passage of this act to organize temporarily as a board and exercise all of the powers and perform the duties set forth in section 18 of this act until the four elective members have been elected and qualified.

COUNTY INSTITUTE SOCIETIES.

SEC. 4. When twenty or more persons, over 21 years of age, residents of any county in this State, shall organize themselves into a society to be called the ——— County Farmers' Institute Society, for the purpose of carrying out the objects of this act in accordance with its provisions and in conformity with rules and regulations furnished by the State board of farmers' institute directors, such society shall be deemed a county institute society and a public corporation of the State: *Provided*, That not more than one such county institute society in any county shall be created by this act: *And provided further*, That no person shall be entitled to enrollment as a member or to vote until he or she has signed the constitution of the society and has paid into the treasury of the society an initiation fee of \$——, and each year thereafter for continuing membership the sum of \$—— annual dues.

SEC. 5. The first meeting for the purpose of organizing a county farmers' institute society shall be called by the State board of farmers' institute directors, to be held at the county court-house of each county, respectively, upon such date as the State board of farmers' institute directors may select, and each of the clerks of the courts of common pleas of the several counties shall give notice of such meetings for organization in two newspapers in each county by two insertions, at least one week apart,

and the last one not more than one week prior thereto; he shall also attend the meeting, call it to order and preside until a president be chosen. The expense of the notices so published shall be paid by the respective counties, the bills to be approved by the clerks of the courts of common pleas ordering them.

SEC. 6. The meeting thus called shall organize by enrolling at least 20 members, as provided in section 4, and then proceed to elect a president, a vice-president, and a secretary, and one person from each township in the county to act as a member of the county board of farmers' institute directors to serve until the next regular annual meeting of the society, and until their successors are elected.

SEC. 7. The directors thus chosen shall meet at the county court-house thirty days after the adjournment of the meeting at which they were elected, and organize a temporary county farmers' institute society by electing a president, a vice-president, a secretary, a treasurer, and an executive committee of three members, all to be chosen from among the directors, to serve until the next annual meeting of the society and until their successors are elected, except that the secretary and treasurer may be selected outside of the membership of the board of directors.

SEC. 8. Each temporary institute society thus organized shall immediately report its organization to the State superintendent of farmers' institutes, accompanied by a statement giving the name of the society, the number of members, the name and post-office address of each officer, and a copy of its constitution and by-laws.

SEC. 9. The first annual meeting of each society shall take place on the — of —, to be called by its executive committee, at which time a permanent organization shall be effected, and only members shall be entitled to vote.

SEC. 10. The officers of the permanent organization of each of the county farmers' institute societies herein provided for shall be a president, a vice-president, a secretary, a treasurer, and one director from each township in the county, to be elected at the annual meeting of the society by the members thereof from their membership by ballot, to hold office for one year and until their successors are chosen, except that the secretary and treasurer may be elected from outside of the membership of the society, and the secretary shall be elected for three years and until his successor is chosen.

SEC. 11. There shall be an executive committee in each county society, consisting of the president and secretary ex officio, and three directors elected by the township directors from their number, to hold office for one year.

SEC. 12. Each county farmers' institute society shall hold annually a meeting at the county seat upon the — of —, at which meeting the members shall elect by ballot officers for the ensuing year and one delegate to the next annual meeting of the State board of farmers' institute directors, and the said delegate is hereby empowered to vote for persons to fill such vacancies as exist or are about to occur in the membership of the said State board, and to make such reports and recommendations respecting the institute work of the State as he may deem proper.

SEC. 13. The county farmers' institute societies shall have authority to form township farmers' institute societies in the townships of their respective counties, in accordance with rules and regulations furnished by the State board of farmers' institute directors: *Provided*, That but one such society shall be created in any one township.

SEC. 14. Any county farmers' institute society shall have power, in cooperation with any township institute society in that county, to form district institute clubs in such township in accordance with rules and regulations furnished by the State board of farmers' institute directors for the purpose of holding local meetings and for cooperation with the township and county institute societies in conducting institute work.

SEC. 15. The treasurer of each county in which a county farmers' institute society has been organized in accordance with the provisions of this act that has held at least one farmers' institute meeting each quarter during the year, and at which lectures and discussions on farm topics were given, and to which the farming public were invited, shall pay to the treasurer of such farmers' institute society properly certified bills for expenses incurred for this purpose to the amount of \$100 annually for counties having, according to the last census, 1,000 farms or less, and in counties having over 1,000 farms \$50 additional for every additional 500 farms or fraction thereof: *Provided*, That before payment shall be made a certificate shall be presented signed by the secretary of the State board of farmers' institute directors approving the items contained in the said vouchers and certifying that the said county farmers' institute society has complied with all of the conditions imposed upon it by this act.

SEC. 16. Each county farmers' institute society shall, through its secretary, make an annual detailed statement of all of its expenditures for institute purposes, and prepare and forward to the State superintendent of farmers' institutes a full report of the

institute work of the year upon blanks to be furnished by the State superintendent of farmers' institutes; and any county farmers' institute society failing or refusing thus to report, or to hold institute meetings as directed in this act, shall be deprived of the benefit of any appropriation from the State or county for that year.

SEC. 17. All county institute societies organized under this act shall be strictly non-partisan and nonsectarian in every phase of their work, and no institute shall be operated in the interest of any party, grange, alliance, farmers' club, religious sect, or society, but for the equal good of all citizens and farming communities. No fee shall be charged for admission to institute meetings held under this act, but they shall be public and free to all, except that the members of the society shall pay the annual fee of not less than \$—, as provided in section 4 of this act.

STATE BOARD OF FARMERS' INSTITUTE DIRECTORS.

SEC. 18. That immediately after the passage of this act the ex officio members of the State board of farmers' institute directors, as provided in section 3, shall meet at the State agricultural college and organize temporarily by the election from their number of a president, a vice-president, and a secretary, and shall prepare and publish rules for the organization of the county farmers' institute societies, shall issue notices to the clerks of the courts of common pleas of the several counties for meetings to organize county farmers' institute societies, and as soon as one-fourth of the counties shall have organized societies, in accordance with the provisions of this act and with the rules of the State board, the said board shall notify them to elect delegates to a State convention to be held at a time to be fixed by the board, for the purpose of electing four persons to membership in said board. The actual and necessary traveling and hotel expenses incurred by the regularly accredited delegates in attendance at the annual State convention held to elect members to the State board of farmers' institute directors, shall be paid by the State treasurer upon the presentation of properly certified itemized vouchers approved by the secretary of the State board of farmers' institute directors.

SEC. 19. Within thirty days after the State convention and the election so held, the State board of institute directors shall meet and organize by the election of a president, a vice-president, and a secretary who shall also be superintendent of farmers' institutes, and an executive committee of five of their number, of which the president of the board and the superintendent of farmers' institutes shall be ex-officio members; all to serve for the period of one year, except that the secretary and superintendent of institutes shall be elected for a term of three years, and until his successor is appointed, at a salary of \$— per year. The board is also empowered to employ such clerks, stenographers, typewriters, and other employees for institute service as it may from time to time find necessary.

SEC. 20. The board shall have the power to fix the salaries of its officers, except that of the secretary and superintendent of farmers' institutes otherwise provided for, and to pay them out of such appropriations as it may receive; to employ and pay lecturers who are to give instruction to the farmers of the State; to aid the county institute societies, both by furnishing lecturers and paying such necessary expenses as they may be authorized to incur for institute purposes, and to do such other acts and things as farmers' institute directors as in their judgment will best promote the interests of the institutes and make them most useful to the agricultural people of the State.

SEC. 21. The board shall, on or before September 1 of each year, report its proceedings for the entire year ending June 30 to the governor, showing in detail the manner of its execution of the provisions of this act, and present such recommendations as it may deem important to make, and such papers and addresses delivered before the farmers' institutes of the State as it may select, said proceedings, report, and papers to be printed and bound to the number of — thousand copies by the public printer, and to be paid for as other public printing is paid. The said reports shall be apportioned as follows: To the State board of farmers' institute directors, — copies; to each member of the State senate and house of representatives, — copies; to each county farmers' institute society organized under this act, — copies; to the executive department of the State government and to the State library, each, — copies; to the State agricultural college, the State agricultural experiment station, the state board of agriculture, and to the Secretary of the National Department of Agriculture, each, — copies.

SEC. 22. A statistical report of the farmers' institute work for the year ending June 30, giving the number of one-day institutes held during the past year, the number of two-day institutes, and the number continuing three or more days; the total number of sessions, with the average attendance per session; the cost of the

institutes; the amount appropriated by the State; the amount received from other sources, designating the sources; the number of State lecturers; the number of local lecturers; the number of lecturers supplied by the agricultural college and experiment station, with the days contributed, shall be prepared by the board and forwarded to the Secretary of Agriculture of the United States, on or before September 1 in each year, for incorporation in the annual reports of the Division of Farmers' Institutes of that Department, together with such additional information respecting the farmers' institute work of the State as the said Department of Agriculture may from time to time request.

SEC. 23. All appropriations made by the State for farmers' institute purposes shall be made to this board, to be paid by the State treasurer upon the presentation to the auditor of the State of properly itemized vouchers certified by the president of the board and countersigned by the secretary. The board shall have the sole disposal of the funds thus appropriated, and shall apportion and expend the same in such manner as in its judgment will best promote the interests of the farmers' institute work throughout the State. It shall make no appropriation without funds in hand to meet the same, and the State shall in no event be held liable or responsible for debts, obligations, or contracts made by the board of farmers' institute directors.

SEC. 24. The State board of farmers' institute directors shall have power to fix the dates at which the institutes shall be held within the State; to appoint speakers to address the institute meetings; to review programmes of exercises prepared by the county institute societies, and to strike out objectionable features or to exclude speakers; to district the counties of the State into institute sections; to arrange the itinerary of lecturers; to require reports from time to time respecting the institute work from county institute societies upon blanks which it shall provide; to audit and approve the accounts of the county institute societies, and to require of these societies itemized statements of all receipts and expenditures, with vouchers, at such times as it may direct.

SEC. 25. Rooms at the State agricultural college shall be provided by the State for the use and accommodation of the board of directors, and be fitted with the necessary furniture and office fixtures, which rooms shall be in charge of an officer of the board and during business hours be open to the public.

SEC. 26. The State board of farmers' institute directors shall appoint the executive committee, and the president of the board shall appoint committees on the following subjects: Domestic science, improvement of institutes, rural schools, public roads, experimentation in agriculture; agricultural fairs; circulating libraries and farmers' reading courses, State college and experiment station work, and the improvement of country youth, and shall have power to appoint such additional committees as it may deem necessary.

SEC. 27. It shall be the duty of the State board of farmers' institute directors, in cooperation with the county institute societies, to organize township institute societies and district institute clubs. In furtherance of this it shall prepare and transmit to the county societies forms of organization for the township societies and district clubs, together with sets of rules for their guidance, which form of organization and sets of rules shall be uniform for the State and be framed with a view to uniting all institute societies in one common institute system.

SEC. 28. It shall be the duty of the State board of farmers' institute directors to encourage the formation of institutes for women and make such appropriations for their support as it may deem best. It shall also secure circulating libraries of agricultural literature and aid in their distribution among the farmers of the State, and take such measures as it shall deem effective to interest the young people of the country in agricultural education.

SEC. 29. All necessary expenses under the provisions of this act shall be paid by the State treasurer, upon the presentation of itemized vouchers approved by the president and secretary of the State board of farmers' institute directors: *Provided*, That not more than \$— shall be expended in any one year.

SEC. 30. The board of directors is empowered to make and enforce such rules and by-laws not in conflict with the laws of this State as it may deem necessary for conducting its business and for the effective carrying out of the true intent and purposes of this act.

BY-LAWS FOR A STATE BOARD OF FARMERS' INSTITUTE DIRECTORS.

Whereas by act of assembly approved ————, 190—, the ———— State board of farmers' institute directors was created, empowering it to make rules and by-laws for its government and the management of its business, the following by-laws are hereby adopted:

ARTICLE I.—DIRECTORS.

SECTION 1. The board of directors shall hold a meeting in the institute rooms at the State agricultural college on the third Wednesday after the annual meeting of the county institute delegates to elect directors, the old board to dispose of its business, the new board to organize, elect officers, and outline its policy for the ensuing year, and transact such other business as may come before the board.

SEC. 2. The board of directors shall also meet between the 1st day of September and the 10th day of October in each year, the date and place to be designated by the president in his call for the meeting.

SEC. 3. Special meetings of the board of directors may be called by the president by giving ten days' notice thereof; or upon a written petition signed by four members of the board the secretary shall call a meeting.

SEC. 4. The board of directors shall fix the salaries of all officers except that of the secretary before the election to fill said offices.

SEC. 5. Five members of the board shall constitute a quorum for the transaction of business.

ARTICLE II.—OFFICERS.

SECTION 1. The officers of the board of directors shall consist of a president, a vice-president, and a secretary, who shall also be State superintendent of farmers' institutes, all to be elected by ballot to serve for one year and until their successors are elected and qualified, except in the case of the secretary and superintendent of farmers' institutes, who shall be elected for a period of three years and until his successor is elected and qualified.

SEC. 2. The officers of the board must be members of the board, except the secretary, who may be other than a member of the board.

ARTICLE III.—PRESIDENT AND VICE-PRESIDENT.

SECTION 1. The president shall be the chief executive officer of the board of directors; shall appoint all committees except the executive committee; he shall be ex-officio member of all standing committees; he shall preside over all of the meetings of the board and of the executive committee, sign all warrants for expenditures, approve all bills, and perform such other duties as are usual to a presiding officer.

SEC. 2. In case of the absence or disability of the president, or in case of a vacancy in that office, the vice-president shall perform his duties.

SEC. 3. In case of the absence or disability of these officers, or in case both offices become vacant, any director or member of the executive committee who is called to the chair shall act as the president for the time, and sign all necessary papers.

ARTICLE IV.—SECRETARY.

SECTION 1. The secretary shall also be superintendent of farmers' institutes; shall attend and keep a record of all meetings of the board of directors and of the executive committee; he shall act as secretary of the annual meeting of delegates to elect State directors, and shall keep minutes of the proceedings; he shall countersign and approve orders upon the State treasurer for all proper expenditures, and shall have charge of the books of account.

SEC. 2. He shall, under the direction of the board of directors and of the executive committee, have supervision of the farmers' institutes held in the State; he shall make recommendations as to the lines of work which he believes will prove most profitable, and shall submit all plans and arrangements for farmers' institute work for the approval of the board or the executive committee. He shall visit county institutes and district meetings when so directed by the board or executive committee, or when, in his judgment, the institute work demands such visit.

SEC. 3. He shall be librarian of the State farmers' institute free libraries, when such are established, and shall submit to the board of directors or, to the executive

committee for approval lists of books which he deems ought to be purchased for the use of the libraries.

SEC. 4. He shall have a permanent office at the State agricultural college, under the control and supervision of the board, which office shall be supplied and maintained at the expense of the State, and he shall be the custodian of all the reports and papers belonging to and all property owned by the State board of institute directors, and shall report an inventory of all property of the board of directors at the close of each fiscal year. He shall collect such of the papers, addresses, and discourses given at the various farmers' institute meetings as he shall deem proper and advisable to publish, shall edit the same, and upon approval by the board shall cause them to be printed in a volume to be known as the "Farmers' Institute Annual." He shall also make a report in writing at the close of each institute year to the board, giving a full account of the institute meetings held, the attendance at each meeting, the list of speakers at the various meetings, the items of expenditure during the year, together with a general survey of the work of the year, and embodying such recommendations for the improvement of the work as he may deem best to make, the whole or a summary of this report to be published in the Farmers' Institute Annual. He shall make such other reports during the year as the board of directors or the executive committee may desire, and perform such other acts and duties as the office of the secretary and superintendent of farmers' institutes may require.

ARTICLE V.—STANDING COMMITTEES.

SECTION 1. The duties of the standing committees, unless otherwise provided for by these by-laws, shall be suggestive and recommendatory in character. They shall meet at the same time and place that the board of directors' meetings are called, and report to the board of directors the progress made in and all the needs of their respective lines of work.

ARTICLE VI.—EXECUTIVE COMMITTEE.

SECTION 1. The executive committee shall conduct the affairs of the State board of farmers' institute directors in the interval between the meetings of the board, in accordance with the rules and regulations adopted by said board.

SEC. 2. It shall meet on the call of the president of the board of directors and shall be the official adviser of the State superintendent of institutes when the board of directors is not in session; it shall pass on all bills before they are paid, and upon all arrangements submitted to it by the State superintendent for holding State farmers' institutes, the selecting of speakers, the preparation of programmes, and the fixing of dates for the county institutes. The committee shall at the close of the year submit its minutes to the board of farmers' institute directors for information and approval.

ARTICLE VII.—COMMITTEE ON DOMESTIC SCIENCE.

SECTION 1. The committee on domestic science shall devise and recommend to the board of directors means for the establishing and conducting of women's domestic science associations in connection with the farmers' institute work.

ARTICLE VIII.—COMMITTEE ON IMPROVEMENT OF FARMERS' INSTITUTES.

SECTION 1. The committee on improvement of farmers' institutes shall take into consideration the methods adopted in the management of county and district farmers' institutes; the programmes submitted, the arrangement of circuits for institute meetings, the employment of speakers, and make report to the board, with such recommendations for improvement on these lines as they may deem best.

ARTICLE IX.—COMMITTEE ON RURAL SCHOOLS.

SECTION 1. The committee on rural schools shall collect information in regard to the character of instruction given in the rural schools; the degree to which agricultural subjects are taught in those schools, and the method of teaching; the location of schools in which agriculture is taught, and report to the board on the progress made.

ARTICLE X.—COMMITTEE ON PUBLIC ROADS.

SECTION 1. The committee on public roads shall collect information in regard to the public roads of the State and submit to the board at its annual meeting recommendations for their improvement.

ARTICLE XI.—COMMITTEE ON EXPERIMENTATION IN AGRICULTURE.

SECTION 1. The committee on experimentation in agriculture shall investigate the subject of cooperative experimentation and demonstration farms among farmers, with a view to the discovery of the best methods for organizing and conducting this work. The committee shall make report to the board of directors at its annual meeting.

ARTICLE XII.—COMMITTEE ON AGRICULTURAL FAIRS.

SECTION 1. The committee on agricultural fairs is charged with the duty of investigating the county fair associations of the State and of reporting their condition to the board of directors at its annual meeting with suggestions for increasing their usefulness.

ARTICLE XIII.—COMMITTEE ON CIRCULATING LIBRARIES AND FARMERS' READING COURSES.

SECTION 1. The committee on circulating libraries and farmers' reading courses shall make a careful study of what is being done in these directions and suggest to the board at its regular annual meeting such additions and improvements as it may deem best in order to extend most widely the benefits of these features of the institute work.

ARTICLE XIV.—COMMITTEE ON THE AGRICULTURAL COLLEGE AND EXPERIMENT STATION.

SECTION 1. The committee on the agricultural college and experiment station shall each year visit these institutions in order to familiarize themselves with their work, and shall make report to the board of farmers' institute directors, suggesting and recommending methods by which the institutes can be most helpful in promoting their interests.

ARTICLE XV.—COMMITTEE ON THE IMPROVEMENT OF COUNTRY YOUTH.

SECTION 1. The committee on the improvement of country youth is charged with the duty of devising means for the improvement of the young people throughout the rural districts, and is directed to submit each year a report to the board upon this subject at its annual meeting.

ARTICLE XVI.—AMENDMENTS.

SECTION 1. These by-laws may be amended at any regular meeting of the board of directors by a majority of all of the members of the board voting in the affirmative, but such amendment must be submitted in writing, filed with the secretary, and read at two regular meetings next preceding that on which the vote is taken.

CONSTITUTION FOR A COUNTY FARMERS' INSTITUTE SOCIETY.

NAME.

ARTICLE I. This organization shall be known as the ——— County Farmers' Institute Society.

OBJECT.

ARTICLE II. The object of this society shall be to assist and encourage useful education among farmers and to develop the agricultural resources of this county by means and through the holding of farmers' institutes in cooperation with the State board of farmers' institute directors, as provided by the act of assembly creating that board; by organizing and aiding township institute societies and district farmers' clubs; by disseminating useful agricultural information; by teaching better methods in general farming, stock raising, dairying, fruit culture, and other branches of agricultural industry; and in general to promote the moral, intellectual, social, and material welfare of the community.

MEMBERSHIP.

ARTICLE III. Any resident of the county of legal age may become a member of this society by signing the constitution and paying a matriculation fee of — cents, and may continue membership by the payment each year of — cents and dues. Only members of the society shall be entitled to vote.

OFFICERS.

ARTICLE IV. The officers of the society shall consist of a president, a vice-president, a secretary, a treasurer, one director from each township, and an executive committee of five, of which the president and secretary shall be ex officio members.

PRESIDENT AND VICE-PRESIDENT.

ARTICLE V. It shall be the duty of the president to preside at all meetings of the society and of the executive committee, and he shall have authority to call special meetings. In the absence of the president the vice-president shall perform his duties.

SECRETARY.

ARTICLE VI. It shall be the duty of the secretary to keep a record of the proceedings of all meetings of the society and of the executive committee; to keep a roll of the members, with the post-office address of each, and to conduct all correspondence relating to the business of the society. At the close of the annual institute he shall make out a detailed statement of the expenses of the institutes for the year and forward a copy to the State superintendent of farmers' institutes, together with a report of the work of the institute for the year just closed. He shall visit and assist in organizing township institute societies and district clubs, and arrange for delivering courses of lectures before the township societies and district clubs during the year. He shall be the librarian of the society and attend to such other duties in connection with the county institute work as he may be directed by the executive committee to perform. His salary shall be fixed by the board of directors.

TREASURER.

ARTICLE VII. It shall be the duty of the treasurer to receive all moneys belonging to the society and to pay out the same on the written order of the executive committee.

EXECUTIVE COMMITTEE.

ARTICLE VIII. It shall be the duty of the executive committee to make arrangements for institute meetings, to engage halls, select local speakers, arrange for music, prepare programmes, and submit the same to the State superintendent of farmers' institutes for approval, to advertise the meetings, to contract and order the payment of bills, to audit and settle accounts made for the society, to assist in organizing township institute societies and district farmers' clubs, and to aid in providing lecturers to give instruction in township and district meetings.

ANNUAL MEETING.

ARTICLE IX. The institute year shall begin July 1 and end June 30. The annual meeting for the election of officers shall be held at a date to be selected by the executive committee of the society, between the 1st and 20th of June of each and every year. The annual meeting shall be advertised by mailing to each member, at least ten days before the date thereof, an announcement calling the members together; said announcement shall specify the date, place, and hour of the meeting, and shall contain a programme of said meeting. Posters and newspaper advertising may also be employed to make the meeting publicly known.

ELECTION.

ARTICLE X. All officers of the society shall be elected at the annual meeting to be called as prescribed in Article IX. The election shall be by ballot, and none but members shall be entitled to vote. The president, vice-president, treasurer, and a director from each township shall be elected annually, except that in townships where institute societies exist no directors shall be elected by the county society, the president of the township institute society being ex officio a member of the board of county farmers' institute directors, and except that the secretary shall be elected every third year. When a vacancy occurs an election shall then be held to fill the unexpired term. All of the officers shall be elected from the membership of the society, except that the secretary and treasurer may be chosen from others than members. At that meeting there shall also be elected a delegate to attend the meeting to elect State directors of farmers' institutes.

QUORUM.

ARTICLE XI. Ten members shall constitute a quorum.

ORDER OF BUSINESS.

ARTICLE XII. The order of business to be observed at the meeting of this society shall be ———.

GOVERNMENT.

ARTICLE XIII. This society shall be governed by the usual parliamentary rules, and shall at all times conform to the laws of the State creating it and to the rules of the State board of farmers' institute directors.

AMENDMENTS.

ARTICLE XIV. This constitution may be amended by a vote of two-thirds of the members of the society taken at any regular meeting, but such amendment must be submitted in writing, filed with the secretary, and read at two regular meetings next preceding that on which the vote is taken.

CONSTITUTION FOR A TOWNSHIP FARMERS' INSTITUTE SOCIETY.

NAME.

ARTICLE I. This organization shall be known under the name of the ——— Township Farmers' Institute Society.

OBJECT.

ARTICLE II. The object of this society shall be to cooperate in farmers' institute work with the county farmers' institute society, and to aid in organizing and in promoting interest in district farmers' clubs in this township.

OFFICERS.

ARTICLE III. The officers of this society shall be a president, a vice-president, a secretary, a treasurer, and an executive committee of five persons, two of whom shall be the president and the secretary of the society. The president is also by virtue of his office the representative of the society on the board of the county farmers' institute directors.

DUTIES OF OFFICERS.

ARTICLE IV. The duties of the president shall be to preside at all meetings of the society and of the executive committee; to represent the society on the board of the county farmers' institute directors; to sign all orders on the treasurer, previously approved by the executive committee, for the payment of bills; to call special meetings of the society, and to perform such other duties as are usual to the office of president. In the absence of the president the vice-president shall perform his duties.

SECRETARY.

ARTICLE V. It shall be the duty of the secretary to attend all meetings of the society and of the executive committee and keep a record of the proceedings; to take charge of and preserve all papers, documents, and other property of the society; to act as librarian and attend to such duties as that office may require; to make out annually a report of the work of the society and transmit it to the secretary of the county farmers' institute society; to keep the roll of members; issue notice of meetings called by the president or by the executive committee; conduct correspondence, and perform such other duties as are usual to the office of secretary.

TREASURER.

ARTICLE VI. It shall be the duty of the treasurer to receive all moneys and to pay out the same on the written order of the president after approval by the executive committee; he shall collect all fees and dues of members and keep a correct account of all moneys received and expended; he shall each year, at the annual meeting,

present an itemized report, showing the receipts and expenditures for the year, accompanied by properly signed vouchers for such expenditures, and submit his books and accounts to the executive committee for auditing.

EXECUTIVE COMMITTEE.

ARTICLE VII. The executive committee shall make all contracts and approve all bills for the society, and at the close of the year audit the accounts of the treasurer; it shall arrange programmes for township institutes; select local speakers and engage halls for meetings; call such special meetings as may be found necessary; and arrange for meetings of the county institute when they are appointed for that township, and in all respects act as the executive of the society.

MEMBERSHIP.

ARTICLE VIII. Any person of good moral standing may become a member of this society by signing the constitution and agreeing to support the rules and regulations made in pursuance thereof, and by paying \$— annually into the treasury. Honorary memberships may be conferred in consideration of eminent character and service, and shall be conferred without fee or dues. The recipient shall not be entitled to hold office, but may take part in all discussions and vote on all questions.

MEETINGS.

ARTICLE IX. There shall be at least four meetings held each year at intervals of three months. All meetings shall be open to the public. There shall be no charge for admission to any meeting, and no collection shall be taken. An annual meeting for the election of officers shall be held between the — day of — and the — day of —, at a date to be fixed by the executive committee. Due notice shall be given by the secretary to all members of the date and place of the annual meeting and at least ten days before the meeting is to occur.

ELECTIONS.

ARTICLE X. The election of officers shall be by ballot and shall be for one year, except that the secretary shall be elected for three years. None but members shall be entitled to vote. The terms of office shall begin at the close of the annual meeting.

AMENDMENTS.

ARTICLE XI. This constitution can be amended by two-thirds of the members present voting in the affirmative; but such amendment must be submitted in writing, filed with the secretary, and read at two regular meetings next preceding that on which the vote is taken.

BY-LAWS FOR A TOWNSHIP FARMERS' INSTITUTE SOCIETY.

MEETINGS.

ARTICLE I. This society shall assemble quarterly. The time and place of the meetings may be altered at any regular meeting of the society by a vote of two-thirds of the members present.

QUORUM.

ARTICLE II. Seven members shall constitute a quorum for the transaction of business; a less number may meet, maintain a discussion on any topic, and adjourn to any given time. Persons present, not members of the society, may be invited to take part in all discussions of agricultural topics, but they shall not take part in the business of the society.

LIBRARY.

ARTICLE III. There shall be a library established for the use of the society which shall be open to the free use of the members. It shall be maintained by voluntary contributions and donations of the members and shall be in charge of the secretary of the society. There shall be a library committee of three members appointed at each

annual meeting, of whom the secretary shall be one and ex officio chairman, which shall have charge of the purchase and collecting of books, papers, and pamphlets for the library and perform such other duties as that office may require.

AMENDMENTS.

ARTICLE IV. These by-laws may be amended in the same manner as the constitution.

CONSTITUTION FOR A DISTRICT FARMERS' CLUB.

NAME.

ARTICLE I. This society shall be called the ——— Farmers' Club.

OBJECT.

ARTICLE II. The object of this club shall be the social, moral, and intellectual improvement of its members, and the promotion of their common and individual interests as agricultural people. To this end they pledge themselves to cooperate with each other in carrying out the duties enjoined by this constitution, and to aid the township and county institute societies in conducting farmers' institute meetings, and the State board of farmers' institute directors, the State agricultural college, and the State agricultural experiment station in their efforts to improve the agricultural people of the State.

OFFICERS.

ARTICLE III. The officers shall be a president, a vice-president, a recording secretary, a corresponding secretary, and a treasurer.

ARTICLE IV. The duties of officers shall be such as are usual to those positions.

ELECTION.

ARTICLE V. The officers shall be elected by ballot annually at the June meeting of the club to serve for one year and until their successors are elected.

MEMBERSHIP.

ARTICLE VI. The active members of this club must be engaged in agricultural pursuits.

HONORARY MEMBERS.

ARTICLE VII. Honorary members may be elected by unanimous vote.

NUMBER OF MEMBERS.

ARTICLE VIII. The membership shall not exceed twelve families.

APPLICATIONS FOR MEMBERSHIP.

ARTICLE IX. Applicants for membership must have their names submitted at the meeting previous to the one they are invited to attend, and on receiving a two-thirds vote by ballot shall be declared elected.

NUMBER OF MEETINGS.

ARTICLE X. The club shall meet once each month at the residence of one of its members.

MONTHLY ADDRESS.

ARTICLE XI. Each member in turn shall be required to prepare a paper upon some agricultural subject, to be read at the meeting to be held at his house.

DUES.

ARTICLE XII. The annual dues of the club shall be — cents, to be paid to the treasurer.

REPORTS.

ARTICLE XIII. The secretary of this club shall, as soon after the close of the meeting as possible, prepare a report of the proceedings and transmit it to the county newspapers for publication as an item of news, and a copy to the secretary of the county farmers' institute society for filing with his records. At the close of the year the secretary shall make out a report of the work of the club for the year and transmit it to the secretary of the county institute society, together with a list of its newly elected officers and their post-office addresses and the number of members on the roll.

TREASURER.

ARTICLE XIV. The treasurer shall pay out no money except upon the written order of the president.

UNIT OF MEMBERSHIP.

ARTICLE XV. The unit of membership shall be the family. Election of the head of the family to the club shall admit the other members.

QUORUM.

ARTICLE XVI. Five members shall constitute a quorum for the transaction of business.

AMENDMENTS.

ARTICLE XVII. This constitution may be altered or amended at any stated meeting by the affirmative vote of two-thirds of the members present, but any proposition to that effect must be made in writing, filed with the secretary, and read at two regular meetings next preceding that on which the vote is taken.

BY-LAWS FOR A DISTRICT FARMERS' CLUB.

SECTION I. The meetings shall be held on the — day of each month at 10 a. m. at the residences of the various members of the club. The place of each meeting shall be designated and announced by the president. The selection shall, as far as possible, be in alphabetical order, but before any selection is made the president shall first ascertain whether it will be convenient for the member next in turn. If found satisfactory, the announcement shall be made before the meeting adjourns.

SEC. II. The extending of invitations to the meetings shall be limited to the hostess of the day.

SEC. III. Any member who shall absent himself from four successive meetings without a reasonable excuse to be accepted by the club shall have his name stricken from the list of members.

SEC. IV. Any member not complying with Article XI of the constitution of this club shall pay a fine of \$— to the treasurer.

SEC. V. The introduction of topics other than those of an agricultural character will be considered out of order during the sessions of the club unless admitted by unanimous consent.

SEC. VI. Each member is expected to keep an accurate record of one or more crops, giving such data respecting them as may be deemed interesting or useful, the record to be handed to the secretary to be read for the benefit of the club.

SEC. VII. The members are required to cooperate in conducting one or more experiments in agriculture. They are also expected to test such new and improved varieties of seeds and plants as they may select or the club supply; to keep accurate records of the experiments and tests and make known to the club the results.

SEC. VIII. The members of this club are required to cooperate with the county and township institute societies in conducting farmers' institutes in the country, and with the agricultural and State experiment stations in their educational and experiment work.

SEC. IX. When voting by ballot each family of two or more shall be entitled to two votes.

SEC. X. Business shall be conducted as follows:

- (1) Called to order by the president at 10 a. m.
- (2) Calling the roll and reading the minutes of the last meeting.
- (3) Election and introduction of new members.
- (4) Unfinished business, including answers to referred questions.

- (5) Reports of experiments and discussions respecting them.
- (6) Reading of paper prepared by the host or hostess, followed by discussion.
- (7) Inspection by the men of the premises, the farm, the system of culture, the stock, the farming implements, the gardens, buildings, etc., with criticisms and suggestions; and of the house and surroundings by the women.
- (8) Each member shall be asked in turn by the president whether he has any question to propose to the club, and when a question is thus asked, each member shall be required to give his opinion respecting it, after which a vote shall be taken and the secretary shall note the vote of the club in the minutes.
- (9) New business.
- (10) Announcement of the place of the next meeting.
- (11) Adjournment.

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